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THE SEASON—ITS DELIGHTS AND ITS LABORS.

JUNE, if less flowery than May, is more fruitful; richer hues, if not as gaudy, every where meet the eye; and we have no fear of voting alone, or with a small party, when we give it our suffrage for the most charming, desirable and beautiful of the months.

Whether a Being of Infinite resources could create a more beautiful world than this of our's in early summer, is not for us to decide. That He has made this delightful at the present season, and full of promise—its promises in waving fields, and in blossoms already turning to fruit—is certain. Let us learn to love and to trust the Author of Nature's beauties and bounties.

But June is a time for work, as well as for admiration of the divine and glorious in nature. The earth will supply all our wants, with labor; but very few, without. If the soil produced spontaneously, and its productions were in the form of well cooked food and ready made clothing,

we might fall into mischief for the want of something better to do.

But bread and meat for the table, and garments for the wardrobe, are not exactly a natural production.—They require to be helped along by human heads and hands. Nowhere do roast turkeys grow out of the ground, with the platter under them, sauce to suit, and the carver and fork in their sides, except in some favored regions of the west, where there is plenty of land to sell, nor even there long after the fact has been extensively promulgated. Most of us must work if we would eat and wear; and it is well; for hardly anything is more difficult for mankind, than to receive with gratitude and use rationally, what costs them nothing.—What is obtained by forethought and labor, affords far more satisfaction, and conduces more to the advancement of the race. Cheerfully, then, let us to the work for the season.

With the exception of a few vegeta-

bles for late use, the buckwheat, some corn to prolong the season for "hot corn," and perhaps some for soiling cattle in case of an autumnal dearth, the crops are supposed to be now in. They are to be attended to well, or the labor of putting them in will not be as well compensated.

Let the garden be kept perfectly clean, and be watered if necessary.—A watering pot is better than nothing for this purpose; but we hope you have a hand engine, which will do the work with more ease and more effectually. Plants should be watered at sunset rather than in the morning, and never in the heat of a sunny day. Watering in the sun causes the ground to bake; and, besides this, the evaporation from the surface is so rapid as to prevent the heat from penetrating as deeply as is desirable into the soil.

Let the fences be now thoroughly looked to, if that was not done at a more proper time—in mid-winter, for getting the materials to the place, and in early spring, for putting them up. Keep the fields clean by stirring the surface often. Every soil takes a considerable part of its plant food from the air, and the oftener it is stirred, so as to present a fresh surface, the more will it absorb. Remember that more than half of every plant, comes from the air, either directly, through the pores of the foliage, or indirectly, by being first taken into the soil, and then passing by the roots into the plant. It is only the ash of plants, when burned, that constitutes their mineral portions, and that only is due to the soil.

If a soil is somewhat heavy, it may be well to work it between the rows

to considerable depth in order to keep it in a condition to be easily penetrated by the roots of plants.—For lighter soils, if properly prepared before putting in the seed, a superficial dressing, to keep down the weeds—rather, to destroy them utterly, to give them no more time to live than to exhaust the vitality of the seeds from which they spring—is enough.

For working between rows, Knox's Horse Hoe is better than the plow, or any cultivator yet invented. It costs but four or five dollars, with iron shares; with steel shares, the cost is not over seven dollars. If well used, and kept under cover when not in use, it will last from ten to twenty years, according as it is used much or little, thus reducing the annual expense to less than the value of the labor saved by it, in the cultivation of a single acre. It should be on every farm where more than one acre of corn is cultivated. One man, with a horse and this implement, and one man with a hand hoe, to finish the work whenever it happens to be done imperfectly, as about the end of the rows, will do more work than three men with a horse and plow and only hand hoes; and, if the ground was previously prepared as it should be, will do it better. In many a field it will save labor enough in a single day to balance the annual expense of maintaining it on the farm.

In addition to clean cultivation, the application of manures to the growing crop is worth considering. With plaster and ashes, this is often done; and although it is better policy—more labor saving and attended with better results, as a general rule—to apply the manure in the soil previous-

ly to planting, yet there will occur cases in which it may be wise to apply a little poudrette or other quickly acting fertilizer, as late as the second or even the third hoeing; and as the impending war in Europe gives a promise of higher prices than were anticipated before planting time, such a course may be specially adapted to the present season. If that war should prove to be long, bloody, and obstinate, we would not advise our readers to rejoice in it, but undoubtedly it would tend to higher prices, and it is but reasonable that increased production should be sought.

With regard to hoeing corn late—after the summer harvest—there are different opinions. It keeps the ground open, accessible to the air, and is so far a benefit. It is beneficial also in preventing the fall seeding of weeds. But we believe it injures the crop by lacerating the roots, and we would therefore say, stir the ground so often, and so exterminate the weeds before harvest, that there will be no necessity for meddling with either after the harvest is over. Even if you should fail to do this in May, June, or early in July, it is at least doubtful whether you gain much by disturbing the roots after harvest.

If you sow corn for soiling purposes, and we believe it is well for dairy farmers, sow in drills, say eighteen inches apart. As high as four bushels to the acre have been recommended. Our own belief is that two bushels will give as much forage and of a richer quality. The soil should be rich, and cleanly cultivated before sowing. It is well to stir the ground between the drills

with a small plow, or cultivator set very narrow, or with the horse hoe. As much corn forage may be grown on a single acre, as seven or eight acres of ordinary pasturage will produce. If not wanted in the Fall, it may be thoroughly dried for Winter use, and nothing is better for milch cows.

Peas may now be sown for turning in as green manure.

A judicious thinning of all vegetables should be attended to in June. A too crowded growth is equivalent to being checked with weeds.

Harvest oats, rye and wheat, after passing out of the milk state, when the inside of the kernel, on being crushed is neither white nor yet hard, but having the color and consistency of dough. It then makes more and better flour than if cut earlier or later.

Potatoes should be hoed the first time when very small, with no hilling. Let them be hilled at the second hoeing, and then only, with very low, broad hills, and if possible let this be done soon after the first hoeing—not more than eight or ten days—while the vines are not yet so spread and fallen as to be injured by the operation. We sometimes see men tangling and crushing the vines, when spread nearly over the ground; and, if the crop were ours, we would thank them to "let alone."

Carrots, parsnips, sugar beets and mangolds, if not yet sown, should be put in quickly—the sooner the better. With deep thorough tillage and high manuring any of these are profitable crops. Their great benefit is not so much in the actual nutriment they contain, though this is large by the

acre, if not by the bushel, as in keeping the cattle in condition, by giving them as succulent food in connection with dry hay.

We hope you have killed off the May caterpillars, and thus done your part towards ridding your region of the nuisance. The June caterpillars will soon be along. Offer the boys a liberal premium for every nest they will destroy, and we will promise that your orchard will not be long draped with their gray, unsightly habitations.

Any time after the 15th of this month to July, buckwheat may be sown; but the sooner after the 15th the better.

The English think much of beans as a winter feed for sheep, believing them adapted to promote a heavy growth of wool. The large field beans we believe do not do as well in our climate as theirs, and we know not whether they can be made profitable in this country. If to be grown now, early in June, is the time to drill them in.

Let the implements and tools be often examined and kept in repair. They should be housed when not in use. "A place for everything, and

everything in its place," is an important rule for the farm. Some have altered it *practically*, as if it read, a place for every tool, and every place in *some* place; but it costs them more to find a tool, when wanted, than it would to carry it to its place, when done with.

System on the farm is worth much. Some men by acting on a well devised system, punctually carried out, will effect more by easy labor, than others, without system or order, can by the hardest.

During this and the next month your labors will of course be pressing. But if you systematize your time and lay out the work advantageously, you will find time for repose and enjoyment, and some, even in these months, for reading and mental improvement. Allow the boys time for reading. This is an important part of their education. In every employment intelligence is a help to success; and farming is not an exception. Some have supposed it was; but therein has been a great mistake; and may the present be the time, and in our own country the place to correct it.

MARKET DAYS.

A little more than a year since the Trustees of the Massachusetts Society for the promotion of Agriculture—organized nearly three-fourths of a century ago—offered a premium of \$150 for the best essay on market fairs, since called market days, in consequence of the word "fair" having been appropriated by societies

for show and exhibition, while market days are designed to afford opportunities for buying, selling and exchanging animals and farm products, rather than the furnishing of occasions for show. Mr. Richard S. Fay, secretary of the old society, and ex-president of Essex Co. Agricultural society has taken a very active part in origi-

nating this new enterprise. Having lived several years in England and observed the favorable working of market fairs there, he was led to the conclusion that they would prove beneficial here if inaugurated under favorable auspices.

To secure a fair trial, the trustees of the Essex County Agricultural Society, one of the oldest and most efficient county societies in the State, have taken hold of the matter, and have arranged a series of market days to be held at different times and places in the county through the season. Two of these have already been celebrated; the first on the first Tuesday of May at South Danvers, and the second on the third Tuesday of May at North Andover.

They have both proved very successful. Stock and farm produce were sent in for sale, and much property changed hands by auctions and private sales. The farmers have showed an enterprising spirit in contributing to this experiment. The next market day is to be held on the third Tuesday in June at Georgetown. Others are appointed to occur in the months of September and October. It is designed that these market days shall recur annually at the same places on the corresponding Tuesdays of the succeeding corresponding months, at least until the experiment shall have a fair trial.

The chief purpose in establishing market days, is to afford the farmers a better and more economical way of buying and selling farm stock and crops. According to the old custom, if a man wants to buy a cow or a yoke of oxen, he spends sometimes several days in looking about in order

to accomplish his desire. By establishing market days this waste of time will be avoided. Produce, such as roots, fruits and grain may be sold by samples to be delivered when ordered in such quantities as may be specified. Choice potatoes for planting are sold at South Danvers in this way. This has been found to work well in England and Scotland; and should it be found to work well in old Essex, the system will soon be adopted and established in other counties and states.

L. W.

The Massachusetts people seem to be greatly worked up on the subject of market days. Their papers are full of it; and we have several communications on the same subject—an innovation of which we advise them to make full trial and report progress. The foregoing is one of the communications we allude to, and the following is an other.

MARKET DAYS FOR ESSEX.

Two experiments have been made in this county, to see how these markets or fairs after the manner of England would be sustained here; and the success has been so encouraging that the trustees of our county society, have determined to attempt a permanent series of markets at stated periods in Spring and autumn in different sections of the county where they are most encouraged. Beyond question South Danvers will be one of these places, another will probably be found in the vicinity of Lawrence;—and an other at Newburyport. Any thing of the kind requires persevering energy at the commencement. We have found this in the late president

of the society. Mr. R. Fay of Lynn, who learned the value of such fairs by actual observation of them in England. I presume your own observations, Mr. Editor, will accord with those of Mr. Fay. It seems to me, that some such established system of sales is essential to the best success of our agricultural organizations.

Very truly yours,
S. Danvers, *May 23.* J. W. P.

ON FENCING THE FARM.

WILLIAMSPORT, *May 19, 1859.*

MR. EDITOR:—I have made the following calculation as to the expenses connected with fencing one hundred acres of land—I suppose the land to be in the form of a square—which will give a length on side of one hundred and twenty-six and one half perches, thus making the outside fence five hundred and six perches. Now if this land be divided into eight lots, with a lane passing through the center until it reaches the last lots, in order to give an opening into them, and said lots to be two perches or thirty-three feet wide, thus allowing plenty of room to turn with a load into or out of any field, and also giving ample space to plant at each side a row of apple or fruit trees; we will have in round numbers, two lots of twelve and one-half acres each—six of twelve and one-quarter each, and the lane of one and three-quarter acres.

This I consider as convenient a plan as can be made for dividing a farm of the form and size given; tis true that in many cases the lots could with advantage be nearer square and thus save some cost in fencing—but I contend that where a farm is divided

into lots, each lot should communicate with a lane, and that never should it be necessary to pass through a lot to gain access to any other lot. Again I contend that the lane should always be planted with fruit trees, thus making what would otherwise be waste land, both useful and ornamental.

Supposing the farm to be divided as here proposed, the inside fences would be in length nine hundred and eighty perches, which would cost, if posts and rails, say one dollar and twenty-five cents per perch, or in all twelve hundred and twenty-five dollars; if a stone wall, two dollars per perch, or in all nineteen hundred and sixty dollars. I cannot approximate to the cost of a worm or zig zag fence, and do not desire to have anything to do with them; but the above figures will answer for the other fences in this section. Now supposing that farmers usually cultivate within three feet of the center of each fence, then there will be a loss of land by these inside fences amounting to about one and three-tenths acres. The one and three-quarter acres in the lane I will count no loss, for it will contain on each side forty-seven trees, thirty-three feet apart, or ninety-four trees in all; which if of good fruit, will pay a good interest on the value of the land. Now let us approximate to the cost and benefit of these inside fences. I contend that the repairing them, and gradual waste requiring renewal, will amount to at least ten per cent., or on the cost of the post and rail fence, one hundred and twenty-two dollars and fifty cents, there will be a waste of one and three-tenths acres which should have netted

at least thirteen dollars. It will take at least ten days' work to keep down the weeds and briars near such fences on an ordinary farm, costing ten dollars, making one hundred and forty-five dollars and fifty cents, to which may be added one hour each day during the summer (say six months) bringing in and taking out cows and teams which at eight cents per hour will cost a trifle over twelve dollars, which will bring the cost up to say one hundred and fifty-seven dollars. Now suppose instead of all this, the cattle are soiled, and suppose it takes the whole time of one man for the six months to feed and care for them, and that his own board and wages amount to one dollar per day, there will be one hundred and fifty-six working days costing the like number of dollars, thus making the account about square thus far; then suppose twice as many cattle can be kept on the same land when soiled as when pastured, (four times the amount can be kept) then suppose the manure thus made will be worth twice as much as that dropped in the field—how does the account stand?

J. A. M.

Farms are so various in size, form, quality of the land generally, relative quality of the different parts, objects for which they are principally to be used &c. &c., that it becomes exceedingly difficult to give any thing like definite rules for their division into lots. The above case presupposes the farm to be square, also that the land is essentially unique in character, that the buildings are central in the front, or that the occupant has the option so to place them, that

there is no necessity for running a fence otherwise than as you might wish, for the sake of water or to avoid any obstacle or unfitness of ground for farming. Now all these circumstances concur on some farms; it may be on ten thousand out of a million, which would be at the rate of one in a hundred. But that rate would give a large number in the aggregate—perhaps 30,000 for the whole United States—and for all such farms we think the plan of our correspondent admirable.

Some might object to the apple trees in the lane, on the ground that the cattle might be choked with the falling fruit, and that in some cases they would consume valuable fruit from the lower limbs. Our impression is that these inconveniencies would be more than counterbalanced by the destruction of insects that would be devoured in the falling apples. We like the idea of those trees in the lane; and as the writer shows that the land would by no means be made waste land, but would pay interest at least, (he might have said more than interest) we would prefer that the lane should be a little wider than would be required to turn a team, so that all or nearly all the fruit would be within the fences. The apple worm that causes it to fall would then be devoured at once, instead of living to become the progenitor of perhaps millions.

The regularity of the writer's plan commends it. The fences are all on strait lines—are either parallel with the front line of the farm, or at right angles to it, making square work, in straight lines, the plow and harrow, the mower and reaper,

These points are well worth securing, when the land permits.

Most farmers have deemed it good policy to cut their farms into smaller lots than the above recommends. We are of a contrary opinion—would have them larger. Miles of inside fence, cutting the land into half acre, acre, two, three and four acre lots, have their advantages, it is admitted, but they have their disadvantages, and in our opinion the balance is not in their favor. *They do not pay.* The expense is an immense drawback upon the profits of farming—none too large at best.

To fence a single acre, even in the the compactest form, requires just about one rod of fence to every three rods of land. To fence a twenty acre lot, of the same compact form, requires but one rod of fence to about fourteen of land—less than a quarter as much to the acre.

ANALYSIS OF SOILS.

A few years since, I remember to have heard a learned lecturer on agriculture say, that give him a pound of the soil of the field, he would tell you by the aid of chemical analysis, what could be grown thereon. I also remember to have heard from another gentleman quite as learned as the first, and of character more to be confided in, that there were not half a dozen men in the State who could make a reliable analysis of soils. In connection with this subject, I find the following minutes made at the time, whether the cogitations of my own brains, or from some better authority, I cannot say; but such as they are, I submit them for your inspection and correction—if correction is needed.

"Admitting that a correct analysis can be made, what assurance have we that such analysis is a correct expression of the character of the entire field? How many parcels will have to be selected before we can be sure that we have a fair representation of the soil of the field? It will not be easy to find in the same field two perches that will agree entirely in the character of the ingredients. It rarely happens, in lands that have been long under cultivation, that one specimen is a fair representation of the whole. But admitting the soil of the field to be uniform in composition, there are many accidents that may vitiate analytical results. It may happen that an egg or the droppings of some animal or bird shall have mingled with the parcel selected for analysis—then the carbonate of lime will be found in undue proportion. Where soils have been repeatedly plowed, harrowed and fertilized, no one can be certain of its virgin character. The droppings of a dog on a field will thus make many acres to abound in phosphates.

Soil analysis is at best a chance game. Where one wins a hundred may lose. Always interesting, often valuable, rarely economical. It may amuse the amateur, and instruct the philosopher, but for the farmer its value is small if he has to pay for it."

May, 1859.

J. W. P.

NOTE.—On page 262 of your valuable magazine for May, I perceive a brief note that I wrote you about the *Onion Maggot*. I have since become entirely satisfied, that this insect cannot be destroyed, or even checked in its ravages, by the application of guano, in any quantity or any manner. The only effect it can have, is, to advance the growth of the plants that escape the attack of the insect—that springs from eggs deposited by a little fly, that has come from the insect itself. Several of these metamorphoses may occur in the same season. Its facility for propagation, being only equaled by its power of destruction.

THE ART OF FARMING—HOW TO BE OBTAINED

“WHATEVER is worth doing at all, is worth doing well.”—*Old Proverb.*

I state in the onset, that the only true way to acquire a thorough knowledge of practical agriculture,—practical and scientific combined, so as to thoroughly fit one for a tiller of the soil, for a “workman that need not be ashamed,”—is, by instruction upon the farm itself, from early boyhood, until the boy becomes a man, or attains his “majority,” or “independence” as often styled. This period, though it *seems* an age to the young man, is none too long to observe, study, and learn, in the home school of agriculture. It is to the young farmer, what the common school is to the young learner of the common sciences.

Constant observation combined with practical instruction, and the home study of agricultural works, enables him to acquire a thorough knowledge of farming, in all its details, even as he learns, *by degrees*, his own mother tongue.

He grows up with it, and it becomes a part of his nature, a portion of his very being, and when he leaves the old home at the age of twenty-one years, he is “lord of the soil,” and at his option, it will do his bidding.

But there are many *young men*, the sons of mechanics, or professional men, not wishing to follow the calling of their fathers, who desire, in the shortest possible way, consistent with the nature of the case, to fit themselves for practical farmers, and who wish to make farming their occupation for life. They desire to become

“masters of the art” and fit themselves for profitable tillers of the soil. By this occupation, they hope to earn bread, for themselves and their future families. Of course they desire to become thoroughly fitted for it, and yet, with as little expense of time and money, as the condition of things will allow.

How shall the object be accomplished? I reply, and shall be able to prove it, I believe, to the satisfaction of every thinking mind, that to become good, practical farmers, young men, like children, must begin to learn,—continue to learn,—and complete their education upon the farm. It cannot be done anywhere else. Observation and practice, coupled with proper study and reading, long and patiently persevered in, will only produce competent farmers, who can successfully and with pleasure and profit make agriculture a profession.

Other systems there may be, consisting mostly of theoretical instruction attained at schools, with a little amateur farming attached, or, oral and book knowledge, with little if any practical instruction at all, these may do for a certain class, (a class very small I hope, in the aggregate,) but he who expects to earn his bread by the sweat of his brow,—to cause the earth to bring forth in abundance at his bidding, to make the desert, even, “bud and blossom like the rose,” and to do it with profit and pleasure to himself, and with credit, as a practical and successful farmer, must begin where the child begins, at the very bottom of the ladder, and

patiently toil upwards, if he would at last stand upon the top, with the golden apple in his hand.

No woman can become a good housekeeper without education in the kitchen. All the works on Cookery, and the various treatises on the culinary art, never alone can make her an economical and skilful housewife, without having had practical knowledge in all the details of the art, obtained under the supervision and tutelage of a practiced adept. Hence farmers' daughters, brought up under the tuition and guidance of their mothers—all daughters, whose mothers are skilled in the arts of good housewifery, if properly attentive, become equally skillful themselves, an accomplishment of which they may well feel proud. Those wives who are taken immediately from the school into the kitchen, who have never given much attention to the subject of good cookery, and who are obliged to fly for aid to "Cooking made Easy" "Domestic Receipts," &c., for the knowledge they must have, make sorry housekeepers in the outset indeed. We sincerely pity them. Just so in the business of farming. The cases are exactly alike. No man can possibly become a successful farmer, short of a practical education upon the farm. All the books on agriculture extant—any amount of oral instruction, can never alone, without practical knowledge, make accomplished husbandmen.

Take a mechanic out of his shop, or a professional man out of his office, or a clerk from behind the counter; put either of them upon the best farm in the State, with a properly selected library of books, Let them have agri-

cultural papers and all the literature of the land, put the best implements for farming operations into their hands, if they have had no previous practical agricultural instruction, no "life upon and about the farm," they will make at best, indifferent tillers of the soil, and be likely soon to conclude that they have "missed their calling."

The best farmers are those that have from early boyhood been brought up upon the farm, whose every-day life has been amid the toils, tasks and business of agriculture in all its phases—in all its simple, as well as the more important branches, from driving the oxen with the goad when a little boy, to guiding the plow with stalwort arm in manhood—from spreading the green grass in the meadow, to wielding the sythe, and lifting the hay into the highest loft—from husking the golden ears of corn by moonlight—to swinging the grain-cradle in the open wheat fields, from the easiest and most simple, to the most laborious and responsible duties through the multiform avenues of agricultural pursuits.

The natural farmer, if I may be allowed the expression, one who has been brought up upon the farm from a boy, educated into it, until it has become almost an instinct with him, is the most competent instructor in the arts of good husbandry, whether his pupils be men or boys. The "natural farmer" I mean, whose mind has been enriched as it should be by suitable scientific reading, in all that pertains to his important calling.

His Encyclopædia is his enlightened, fruitful mind, his schoolhouse,

his own well-tilled farm. Whether his pupils are his own children or wards, or mature young men wishing to learn the art of husbandry, to fit themselves thoroughly for it, he will prove a competent master.

His own experience—that practical “book of nature,” the farm—his knowledge of the nature of the soil, and the growth of plants, plenty of time, patience and application on the part of the learner, are all that is required to make those under his tuition capable of attaining eminent skill in the arts of husbandry. We take it for granted, that every young man desirous of becoming a farmer, and to enter the “farm school” as a pupil has a decent English education, that he is somewhat acquainted with the chemistry of the soils, and with Botany, and the history of vegetable life. If he has no knowledge of these, he should at once procure suitable text books and commence the theoretical study with the practical, and take them along in company. No man can become a perfect farmer if he fails of acquainting himself with the nature of the soils, and the history of vegetable life and growth. These are the keys that unlock the first great principles of successful agriculture. Such knowledge opens the way to skill in the preparation of suitable compost manures for all soils and crops; the want being known of any lacking element, it can be readily applied.

The art of good farming cannot be attained in a very short space of time. It is a business that a whole lifetime is scarcely able to perfect. There is no profession or calling that requires a wider range of theoretical

and practical knowledge. The sciences of Law, Medicine, and Music, are not more extensive in range of practical detail or necessary scientific attainment than this art of agriculture.

The amount of knowledge necessary for thoroughgoing enlightened husbandry in all its minute operations, both scientific and practical, is beyond my power and province to describe here. I think I shall be sustained in this assertion, however skilled I might be, or however limitless my province and space. Such knowledge can only be had by long, patient persevering study and application.

There is not a day in the year but what the business of the farmer changes. From seed time until the harvest, every day brings to his hands some new task. Perhaps he has just entered upon “virgin soil,” some heretofore uncultivated lot. It is in the early Spring time—there are trees to be felled—timber to be drawn to the mill or market—and the land fitted and appropriated to the proper crop. All this requires knowledge and judgment. The trees must be felled in the right time—the timber properly assorted—and the refuse heaped and burned in the right season. And the crop best adapted to the soil put in timely and judiciously.

But the season advances.

The land most suitable for pasture mowing and tillage must be properly selected and appropriated. Fences are to be made and repaired. The compost manure heap must be made of the proper materials, and compounded so as to meet the wants of soil and crop to which it will be ap-

plied. Time hurries on—plowing sowing, planting, cultivating the young crop, all come along rapidly in succession, presenting a varied round of responsible duties.

In the mean while much time and attention must be devoted to the farm stock, rearing tending and having proper care of them. Horses, horned cattle and sheep—all must have wise attention, in the right time swine and poultry come in for their share of attention.

The haying season quickly follows the seeding time, and in its wake comes the labor of the harvest field. In fact so numerous and intricate are the occupations of the farmer, that I may safely say his labor is new daily the year through.

I think I have shown from the nature of the business of the agriculturist, that time is necessary in order to learn it well. I have also shown that the practical farmer is the most competent instructor in the art of farming.

I have shown that the practical farmer who takes the place of teacher must be suitably acquainted with books pertaining to agriculture as well as the pupils under his care. Again that the farm is the place to give and receive all such instruction. I do not now hesitate to make the positive statement, that the best, the only system of instruction, that can fit any young man to commence the business of farming with any degree of satisfaction, or success, or credit to himself, must be by practical labor observation and instruction upon the farm, combined with the study of suitable literature pertaining to the art. This system of instruction must be pursued

for a sufficient length of time to embrace all the changes that time and circumstances present, to cover the entire ground of the minutiae of the occupation. The well educated, practical farmer will be a safe and sure guide.

Every young man who proposes to become a farmer should in the first place make the following queries: He should be able to answer them at once, decidedly either yes or no.—First, Have you a proper taste for farming? Have you sufficient stamina, and physical strength to engage in such a laborious occupation? To these he ought to be able to answer at once—Yes. Again, he may ask, am I inclined to be indolent, having once put my hand to the plow shall I be inclined to look back?

To these he must be able to answer emphatically—No! Having come to a positive and satisfactory decision, he may safely enter (if thus decided,) upon the study and practice of his chosen business, one of the most noble followed by man—a tiller of the soil.

After choosing a suitable teacher the student should procure for himself a judiciously selected library of standard agricultural books, and subscribe for a few choice periodicals devoted to the interests and instruction of the farming community. His teacher should be a well educated agriculturist, who has long made the business his calling—a man “*apt to teach*,” kind hearted, and willing to bear with the faults and foibles of the beginner. He should be a man ready to impart instruction in all the minor, as well as in the more important branches of the business—in the

"earthy and odorous," as well as in the "ornamental."

The Spring time is the most useful and proper season to commence a course of instruction. The farmer in all his labors and operations is directed and governed by nature. The succession of the four seasons brings to him new duties continually, but Spring as the season of seedtime, seems the most proper season to enter the farm school. The most important preliminaries of farming are commenced, and many of them concluded in the months of March, April, and May. The art of preparing and applying manures, is particularly taught in the Spring months. In this one important subject the student has much to learn. He has already been taught perhaps from the perusal of books, that all vegetable growths, all grasses and grains, are composed of certain chemical elements that are derived from the soil, water, and air, in some soils the necessary elements for promoting the growth of vegetation, for supplying the coveted crop with proper pabulum, or food, is partially deficient. This desideratum is to be supplied by a compost manure, compounded so as to contain these elements thereby supplying the deficiency.

The business of the student is, to study the nature and composition of the soil—to ascertain for what crop it is best adapted, and to suit the seedling to the soil.

In all this he will find suitable instruction in the practical lessons of the enlightened agriculturist, and also in the various works on agricultural subjects, that have within a few years been written. Preparing

the soil, selecting and planting seed, cultivating the young crop—all of them are important branches of husbandry in which the student should become well learned.

The art of cutting and curing grass is a very important branch of farming, one that requires much good judgment, and considerable practical knowledge. The proper time to cut grass is an item of much magnitude. The student can best learn this by observation, guided by suitable instruction and a certain amount of knowledge of the process of vegetable growth and decay. A few days too early, or a few days too late, with some of the grasses would be ruinous in the extreme. The juices must be properly matured, in order to insure sweet, palatable, and nutritious food for animals. If cut too early the nutritive principle is deficiency if too late, it has exhaled into the atmosphere and is lost. The young student farmer will have to learn when to use the scythe or mowing machine, watching the fields with an eagle eye, even as the smith watches the color of the heated steel in order to give it the proper temper.

Again it must be cured well, neither dried too much nor too little—so as to lose its flavor and life, or to heat and mould in the mow and become smoky and insipid.

It is in the hay field, under the eye of the well informed "old time farmer" and guided by his practical knowledge, that the farmer student can most efficiently learn the art of making the fragrant grass into hay. The same may be said in regard to harvesting the grain crop.

"Study," "Observation," "Practice"

—these are the watchwords of the young and ambitious learner of the art—of causing the earth to yield her bounties—of making the fields beautiful in the glory of fruition.

The rearing of different kinds of stock is a business colateral and intimately connected with the business of farming. How can it be learned otherwise than by a system of practical instruction on the farm? Selecting stock—crossing the breeds—rearing and tending the young animals—housing, feeding, and taking proper care of them—fattening stock for the market—the business of the dairy: all these become a part of the constant business of the farmer, requiring experience, judgment, patience and skill; only to be attained by practice, study, and the most diligent and constant observation. The business of stock breeding and rearing, and the business of the dairy can be acquired by the student farmer in connection with the other branches of the business, with the same sources of tutelage; viz: the well-taught agriculturist, and the diligent perusal of suitable books. There are many other sources of instruction beside those named, that the ambitious student should not neglect. In most farming communities there are established, what are called "Farmers' Clubs"—associations of practical farmers, who meet at stated intervals to discuss various topics incidental to their calling. Much can be learn-

ed by a faithful attendance of such organizations, of a practical value. The farmer student should never be absent from these gatherings. The annual meetings and exhibitions of agricultural societies, is another source of intelligence to the young husbandman. The best and choicest agricultural products, improved farm utensils—the finest breeds of cattle are brought together. Many valuable items of intelligence can be gathered from attending these annual fairs, if proper heed be given to the various departments of the exhibition. But I will say very little more. My views of the subject I have endeavored to make brief and plain. I submit them with a modest confidence of approval. I will only add by way of illustration—the business of the merchant can best be learned by practice behind the counter, guided and instructed by the experienced merchant at the head of the establishment.

The mechanic who has learned his trade by actual apprenticeship, under the guidance of a workman of skill and science, will most likely prove a competent artizan himself.

The linguist who attempts to master a language, simply by attention to grammars, lexicons and readers, cannot speak that language so that a native speaker can understand a word he says; he must go where the mother tongue is spoken to become a master himself. I leave the reader to make the application.

THE SEXES OF STRAWBERRIES.

MR. EDITOR:—In the July number of the Magazine, of last year, there appeared a well written article on "The

Sexes of Strawberries," by Dr. McMunn. I was glad to see that subject introduced, for I had often heard

that there were different sexes among strawberries, but had never taken the pains to examine into the matter scientifically, so as to be decided. When Dr. M.'s article appeared and I saw how well he reasoned, and particularly when he brought in botany to bear on the subject, I almost became a convert to his theory. At that time the strawberries had passed the flowering seasons, and I had no opportunity of examining the stamens and pistils of the different varieties, until the present time, when they again came into flower. I think I have now made a pretty thorough examination of the matter, and the result is that I am constrained to differ from the Doctor. Facts speak louder than words, and however plausible a theory may be, if it is opposed to well-known and established facts, it must fall to the ground and give up all claim to the truth. In this way we must establish the truth and falsehood of all science—if it contradicts known facts, we may take it for granted that it is only "Science falsely so called."

Nature has established certain laws by which she carries on her operations throughout the world. It is now generally admitted that there are distinctions of sex in the vegetable as well as in the animal kingdom. Nature has made provisions by which every thing may propagate its own species. She has provided a substance called "pollen," which, by some means or other, must come in contract with the female organs of plants, in order to impregnate them, or make them fertile. In some cases, the stamens which contain this pollen are on the same plants with the pistils. These are perfect in themselves, and are

self-propagating: as wheat, rye, corn, &c. Others, belonging to the dicecious family, have stamens and pistils in different plants: as hemp, mulberry, persimmon, &c. These flowers are imperfect in themselves, and would never be productive unless the two sexes were in the neighborhood of each other.

Now—the strawberry in its wild or natural state may have both organs on the same plant. Of this, however, I am not certain, nor do I think it absolutely necessary that it should be the case; nature has furnished them with fertilizers. But it has been cultivated and hybridized so long that very different varieties have been produced—some with stamens, and some without them. Perhaps it is not strictly true that any variety is entirely destitute of stamens, but they are so small and so imperfectly developed that they appear incapable of fertilizing the stigmas with their pollen. Observation proves that this is the case.

If strawberries always contained perfect flowers it would follow—other things being equal—that they would always be productive; but we find that this is not the case—and how are we to account for this? It cannot be accounted for at all on the principle that all are perfect flowers. But on the principle that we are advocating—viz: that some varieties have pistillate and others staminate flowers—the mystery is solved.

We know that some varieties are nearly, if not entirely, barren, let them be cultivated as they may—while others seem to be productive under almost all circumstances. In proof of this, let any one plant Longworth's

"Prolific" entirely isolated from all others, and he will have a full crop, because the flowers are perfect, having both stamens and pistils.—Again: let him plant M'Avoy's "Superior" in the same soil, and cultivate in the same way, but at a distance from all others, and he will have no fruit, not because it is a worthless berry, but because it has pistillate flowers only and requires the fertilizing influence of some staminate variety in the same neighborhood. If any one doubts this he can easily make the experiment for himself. This is a fact worth knowing, in strawberry culture.

Much has been said about the cultivation of the strawberry—whether it should be planted in a rich or poor soil—whether it should have the full influence of the sun, or whether it should have some shade.

My experience is that a medium soil is the best adapted to the strawberry. A very poor soil should always be avoided—there is not nourishment enough to bring the berry to perfection. On the other hand, when the ground is very rich, the plants throw out too much foliage, and the quantity of fruit is diminished, as well as the sweetness and fine flavor. The strawberry, however, is capable of a high degree of cultivation; but their luxuriance should be checked by a more thorough thinning out. They should have a sunny exposure and be kept free from weeds and grass. No fruit will properly mature or develop its sweet juices without the full and continued influence of the sun's rays.

The strawberry requires a deep soil, and if a layer of straw, to the

depth of two or three inches, be laid over them during the Winter, it will be of great advantage; it need not be removed in the Spring—the plants will push up through the straw; and this straw will serve to keep the fruit clean and nice, as well as enriching the soil.

As to the method of planting, I am so well pleased with Downing's method that I give it in his own words—it cannot be easily improved. It is as follows:

"Early in April, or in August, being provided with a good stock of strong young plants, select a suitable piece of good deep soil; dig in a heavy coat of stable manure pulverized well and making the top soil. Strike out the rows three feet apart, with a line. The plants should now be planted along each line about a foot apart in the row. They will soon send out runners, and these runners should be allowed to take possession of every alternate strip of three feet—the other strip being kept bare by continually destroying all runners upon it—the whole patch being kept free from all weeds. The occupied strip or bed of runners will now give a heavy crop of strawberries the following Spring, and the open strip of three feet will serve as an alley from which to gather the fruit. After the crop is over dig and prepare this alley or strip for the occupancy of the new runners for the next season's crop. The runners from the old strip will now speedily cover the new space allotted to them, and will perhaps require a partial thinning out to have them evenly distributed. As soon as this is the case, say about the middle of August, dig under the whole of

the old plants with a light coat of manure. The surface may be then sown with turnips or spinach, which will come off before the next season of fruits. In this way the strips or beds occupied by the plants are reversed every season, and the same plot of ground may thus be continued in a productive state for many years."

J. R. B.

DEPTH FOR COVERING CORN.

An exchange says:—"As a rule, corn is covered too deep. We would rather have it planted less than an inch deep, on well prepared soil, than over that. On this point, however, there is a great difference of opinion and practice. We shall be glad to hear from our correspondents on the subject."

This we believe to be essentially correct; but much depends on the soil and the season. If you should presume to plant corn on a clay soil, while the ground is yet cold and wet (we would not advise you ever to do it) half an inch would be better than more. On a feasible loam, not very warm at the time of planting, an inch is certainly deep enough. On such a loam, well warmed by the sun and alive with fermenting manures, it is no matter whether you cover one inch or two, for the seed will sprout and grow "right along," just as it should in either case. On light sandy soils, we believe it is better to cover as much as two inches deep, especially if warm and dry at the time of planting. If any heating manure, as ashes or fermenting horse manure, be applied in the hill, the seed should be covered more deeply

than would otherwise be well, that the moisture, in case of little or no rain, may not be expelled to a degree to prevent fermentation.

No business depends so much as the farmer's upon the exercise of a sound judgment. All rules with him are discretionary—are to be varied to suit the then present circumstances.

ESSAY ON THE CULTIVATION OF VEGETABLES.

Next to the cereals the cultivation of vegetables is of the greatest importance. These constitute the principal food of perhaps, more than one-half of the human race. There is no diet more nutritious and wholesome than vegetables, when grown to perfection. In some respects they have the advantage even of the bread stuffs—they are more easily cultivated, more convenient to use, and less exhausting to the soil. Although, as a general rule whatever grows out of the ground exhausts it more or less, yet it is found that such plants as produce abundance of seed exhaust the soil much more rapidly than these which do not produce seed, or are not permitted to mature it.

Meat and bread are the "substantials" of life, but vegetables are the "luxuries"; and however abundant the former might be, without the latter our tables would be poorly furnished. Vegetables not only afford a cheap and wholesome food for man, but most excellent food for our domestic animals.

That farmer work under great disadvantage who feeds his stock on grain instead of vegetables. It is

found by actual experiments that stock fed on vegetables will not require one-fourth part of the grain which they otherwise would do, and keep in better plight than those fed entirely on grain. Now, as vegetables are more easily raised than grain, require less labor, yield more to the acre, more nutritious and much less exhausting to the soil, it is certainly to the interest of the farmer to pay more attention to their cultivation. Every farmer then, if possible, should have a large and warm cellar under his barn, divided off in to different apartments in which to store away his vegetables. This would be one of the most useful and convenient places on the farm. The farmer considers a loft over his barn in which to put his hay, fodder &c. as indispensable, but seems to forget or not to know that a cellar under his barn is equally necessary. This would cost but little, but let the cost be what it would, I have no doubt that the benefit in one year would more than cover it all.

The vegetables most useful and deserving of cultivation are, the potatoe, Irish and sweet, the turnip, the carrot, the onion, and cabbage, and the beet. These all have their peculiar excellence, and serve as food for man and beast.

A short description of the use, manner of tillage, and mode of preserving may not be uninteresting.

The Irish Potatoe.

The Irish potatoe is a native of the mountainous parts of South America. It is there a perennial and is cultivated for its tubers. In its native state it is very inferior, and scarcely edible. It has been reclaimed from

its wild state and brought to its present state of perfection by superior cultivation. It is now more extensively cultivated and more generally used than any other vegetable. It constitutes the principal food of a large portion of the human family. It is pleasant and nutritious, and being exceedingly farinaceous is found to be a better substitute for bread than any other vegetable yet discovered. It will grow in almost any climate, and seems to adapt itself to a great variety of soils. Indeed, it is one of the greatest earthly blessings to mankind; and has become almost indispensable to every family. On account therefore of its superior excellence the best mode of cultivating it is a matter of the first importance.

Cultivation.—The Irish potatoe requires rather a cool, deep, moderately rich soil with a sufficient quantity of sand to prevent it from baking or becoming hard. This indeed is the proper soil for all tuberous rooted plants. It must be deep, as the roots extend a considerable distance into the earth in search of nourishment, and it must be light, that the tubers may have an opportunity of expanding rapidly. A low or bottom soil does not seem to suit the potatoe so well—it is generally too moist and heavy and if the season should be wet the tops will grow to luxuriantly, and the tubers will not be so dry and mealy—the characteristic of a good potato—and besides, in such a soil they will be more subject to rot.

To know what kind of soil is best adapted to the potatoe is of the first importance. By an analysis of the potatoe, it is found that the elementary

principles which predominate, are potassa and phosphate of magnesia. It follows then, that the soil containing these elements in the greatest abundance is the soil best adapted to the potato. Wood ashes or vegetable manure, such as decomposed leaves or straw, or virgin soil from the woods or from the wood-pile, will be suitable for the potato; but never use animal or stable manure—it contains too much ammonia, an article the potato does not require—it is too strong, and will do more harm than good.

In choosing a patch for potatoes, let it be high dry and good soil. If it has been in clover and lain out for some years, so much the better. If it is not sufficiently rich, make it so, by spreading upon the ground the proper kind of manure. Then early in the season if practical, or at least some weeks before planting, let the ground be thoroughly and deeply broken up with a two-horse plough, and sub-soiled.

About the last of February, or first of March, if the weather be suitable, without any regard to the moon—lay off the rows in furrows about two and one-half or three feet apart, and six or eight inches deep; then if you have a sufficiency of decomposed straw or leaves, fill the furrows with this, and having cut your potatoes if small into two pieces, or more if large, always rejecting the blossom end, plant them on the straw with the cut side down about 6 or 8 inches apart. Then cover with earth making all level. Now, if you have straw enough, spread it over eight or ten inches deep. The potato will come up through this and require no

other culture until they are ready for the table—the straw keeping down all weeds and grass.

This method will answer for a small patch sufficiently large for family use, but when cultivated on a larger scale for market, it is not practicable for the want of straw.

In this case the following method is recommended. Having laid off the furrows as above, fill with decomposed straw or leaves; or sprinkle leached ashes in the bottom of the furrows, then plant the potatoes as before and cover with the plough, throwing up a furrow from each side. Then just before the potatoes begin to appear brush them over so as to level the ground. After this, use the plough or hoe as may be necessary. If the ground has been of the proper quality and prepared as directed, other things being equal, you may expect good potatoes, both as it respects quality and quantity. It is said that a handful of bog-hair thrown on a hill of potatoes when planted will greatly increase the yield. It is worth a trial.

But farmers often find it more difficult to keep their potatoes than to raise them. The following method is perhaps the most successful. Potatoes should not be permitted to remain in the ground. As soon as the haulm or vines die they should be dug and spread as thin as possible in a cool dry place, shaded from the sun where the air can freely circulate. If there is not room to spread them as thinly as they ought to be, they should be stirred frequently, so as to give them an opportunity to dry thoroughly. This is called the seasoning process. In this situation

they may remain until they are in danger of frost. They should then be removed to a close dry cellar where they will not freeze, but get sufficiently cool to prevent them from sprouting. It would be well to stir them occasionally, and if any sprouts appear they should be broken off as they injure the potato by making them watery. In this way I have known potatoes to keep good until new ones came.

Or perhaps it is better to let potatoes remain in the ground without digging until frost, or until there is danger of freezing; for they will keep better in the ground where they grew than they will in any other place. When dug let them remain on the ground or spread them in a house until they dry. Then place them on ground which has been somewhat elevated or bedded up for the purpose in a long heap, sloping from each side to a sharp point in the form of the roof of a house, about two and a half feet high. Place a fork at each end of the potato ridge, and then place a straight pole upon the forks so as to lie close upon the top of the potatoes. Now place boards on both sides that will reach from the ground to the top of the pole. Then cover the boards with straw six or eight inches deep, and finally cover the whole with earth sufficiently deep to prevent all danger of freezing. The ends must be kept open when the weather is not too cold in order to admit the air. Now make a shed over them and keep all dry, and they will require no other protection.

Then in the spring, before the potatoes commence growing they should be removed into a house and spread

upon the floor, and frequently stirred so as to prevent them from sprouting. This is better than to put them in a cellar, for a cellar will keep them too warm, and cause them to sprout, which if once they do they are no longer fit for the table.

Potatoes in our climate will degenerate in a few years; it is best therefore to procure seed from the North every third or fourth year. The choice varieties are, the Meshanock or Mercer, the Blue, the London Lady, the Pink Eye for early planting, and the round Red for late. The long Red or Red Meshanock as it is sometimes called, is the most prolific, and is best for stock.

For the last few years the potato has been subject to a disease called the rot. The cause of this is not known, nor has a preventive as yet been discovered. It is found, however, that good sound potatoes, planted in a well pulverized dry soil, or in new land, are not so subject to the disease. Perhaps the only certain remedy is, to procure fresh tubers from the native potato.

There is another pest which has greatly discouraged the farmer in the cultivation of this vegetable; that is the bug. This, for some years has almost entirely destroyed the potato crop. In some localities, it has been worse than in others. No effectual remedy has been found. The bug is known to be regular in its appearance; if, therefore, the potato could be planted either so early or so late as to miss the season of the bug, perhaps the evil might be prevented. Let the experiment be made.

The potato is a wholesome and nutritious vegetable, and it is a great

luxury to have it in perfection; too much care, therefore, cannot be taken in its cultivation.

The Sweet Potato.

This is an esculent, which on account of its tenderness, cannot be cultivated so universally as the Irish potato, but it is considered even more nutritious, and is a more general favorite. The sweet potato does not require so strong or so rich a soil as the Irish. The soil best adopted to to its growth, is a light sandy soil. When the soil is too fertile, the vine grows too luxuriantly, and draws the nourishment from the root. The soil for the Sweet as well as for the Irish potato, should be thoroughly and deeply pulverized. This is important in all cultivation, but more especially in root culture. As early in the spring as the season will admit, generally about the last of March or the first of April, the potatoes should be bedded for sprouting. For this purpose, a bed should be prepared, having a southern exposure. Dig out the soil about two feet deep, three or four feet wide, and as long as may be necessary. Fill it half full with half rotted straw and fresh manure from the stable. Then fill it up six inches with rich soil, and let it remain until it becomes warm by fermentation. Then spread the potatoes regularly over the surface, as close as they can be without touching each other. Then cover them over with rich, well pulverized soil, made warm to the depth of two or three inches. Cover with boards to keep them dry, and if the weather should turn cold, they should be protected by straw. When the shoots are long enough—say from three to six inches,

they may be drawn and planted, on the ground prepared for them. Some make hills, others ridges; the former, I think has the preference. More, however, depends on the *quality* of the soil and its thorough pulverization, than the *manner* of planting.

If planted in hills, pull out the dirt with the hand, on top of the hill, and put in two or three slips in an inclining position; then if the weather is dry, fill the hole with water, and draw in the dirt, making it level. If you plant in ridges, let them be somewhat flattened on top, and the potato planted in the same way, only put one plant in a place and from eighteen to twenty inches apart. The only cultivation they require now, is to keep them clear of weeds and grass.

As soon as the vines are killed by the frost, the potatoes should be dug, and if the weather be fair, they may be left on the ground to dry, a day or two, or put them in piles and cover over with straw and earth, to go through a sweat, and then let them be put in a light, warm and dry cellar made for the purpose, and proof against rats. When the weather is warm, the door should be kept open, but shut when cold. In this way, I have known potatoes kept in a good condition until a new crop came. What a luxury it is to have such a wholesome and such a palatable vegetable throughout the year! Who would not be willing to forego some pains to accomplish so desirable an object.

When a good cellar is wanting, the sweet potato may be put up as directed for the Irish potato with perfect safety. But they are liable

to so many accidents in this way, particularly to the depredations of the rats, that I would greatly prefer a substantial cellar, made for the purpose, either of wood or brick.

Turnips.

These do best in new ground ; but if such cannot be had, let it be highly manured, and thoroughly pulverized before sowing. The very best turnips may be grown in a lot where cows have been kept and fed during the winter. Let it be well broken in the spring, and harrowed or rolled so as to break the clods. Then plow it occasionally, to destroy the weeds, and for a general crop, sow from the middle of July to the middle of August, just before a shower of rain if possible, or immediately after. But if the weather should be dry and hot as is often the case at that season, the seeds may not vegetate, or if they do, may be killed by the hot sun, or eaten by the fly. It is best to make several sowings ; so that if one fails the other may succeed.

The best turnips for the table, such as the White or Flat Dutch &c., are too tender to withstand much frost ; they should, therefore be taken up, and put away as directed for potatoes. The Ruta Baga, or such as are designed for stock, should be housed away in the barn cellar, to be fed out during the winter. They are excellent for cows, sheep or hogs.

The Parsnip.

Parsnips require a deep, rich, sandy loam, the deeper it is ploughed the better. The seed should be sown early—say in March—in drills, about two and a half or three feet apart and thin out to six or eight inches.

Keep the ground clean with a cultivator and hoe, and they require no further attention. They should not be taken up at all. The frosts of winter improve them. The Sugar Parsnip is the best, and should be procured from the North. Ashes are a good manure.

The parsnip is a very healthy and nourishing vegetable. Its fattening qualities are great, and it is, therefore, an excellent root for all kinds of farm stock. It is said that cows fed on parsnips, yield an abundance of milk and butter, of the best quality. It is also productive, and easily raised, and should be more extensively cultivated.

The Carrot.

This vegetable is believed to be even more nutritious than the Parsnip, and contains six times more nutriment than the Irish potato, and is the most productive of all the root crops—producing from three hundred to six hundred bushels per acre. It is, by many thought to be a good vegetable for table use, but is not generally relished as much as the parsnip. Its chief use is for stock, and for this purpose it has no superior. Like the parsnip, it will remain in the ground, without injury through the winter, but for the convenience of feeding them to stock, it is best to store them away in the barn cellar or other convenient place where they will not freeze. One bushel of boiled carrots, and one bushel of corn, are said to be worth as much as two bushels of corn for feeding hogs. They are also excellent for horses and milch cows. A deep sandy loam suits it. Ashes are a good manure. Common salt also is

said to agree with the carrot, better, than with most vegetables.

The Beet.

The Beet, like all other tap-rooted plants, requires a deep, rich, and well pulverized soil. Being a native of the sea-shore, it abounds in soda: common salt, and wood ashes that would furnish the aliment most congenial to this vegetable. The seed should be sown early, in drills about two and a half or three feet apart.

The beet as indicated by its sweetness contains more of the saccharine principle, than any other vegetable cultivated. In France, it is extensively cultivated for sugar. It is also an excellent food for stock in the winter, particularly for cows, causing them to produce an abundance of rich milk. Hence, no doubt it would be greatly to the interest of the farmer to raise them for the purposes above. Their yield would be nearly if not quite equal to the carrot. The Mangel Wurtzel, and sugar beet, are the best for this purpose. For table use the early kinds are preferable.

We cannot too earnestly urge upon farmers the propriety and importance of preparing cellars under their barns or elsewhere, for the purpose of keeping vegetables for their stock during the winter. They would find it greatly to their interest. Stock fed on vegetables would not require half so much grain. Besides they would keep in better condition, and be more healthy. It will also require less labor, and be a great saving of land.

The Onion.

This is an excellent vegetable, and if planted in suitable soil and properly cultivated, will yield an abundant crop. From two to five hundred bush-

els may be raised on an acre of ground.

The Onion requires a light, rich, sandy soil. If manure is used, it should be well rotted, and thoroughly incorporated with the soil. Unfermented manure if in contact with the onion, causes it to rot. Leached ashes, lime, bone dust, or the cleanings of the hen roost, if well mixed with the soil—particularly fresh soil from the woods, is an excellent application.

Early in February, if the weather will admit, the ground should be manured, deeply ploughed and sub-soiled. It should then be made level and smooth on the surface, if rolled the better. If the seed is planted, make very shallow drills about two feet or two and a half apart, and sow very thin, for if sown thick, and have to be thinned out, it will injure those standing. The seed should not be covered more than half an inch. After sowing, it would be an advantage to press the earth over them with a roller or the back of the spade. This will preserve the moisture about the seed, and cause them to vegetate sooner. They should stand about six inches apart. No other culture will be necessary except to keep them clean. Never draw the earth about the onion, but draw it away when they are too deep, as the best onions grow on the surface. If the tops seem to grow too rank, it will be of service to break them down. This, by checking the ascending sap, will cause it to concentrate in the root, and the onion will grow larger.

But the largest onions cannot be grown from the seed the first year. It is best, therefore, to plant the sets. These are obtained by sowing the seed very thick in a bed prepared for

the purpose. They will make small bulbs, which should be taken up when the tops die, dried in the shade and spread out on a dry loft, and planted the next spring. These will make large onions.

The onion most admired for the table, is the Silver Skin; but it is more tender and more liable to rot than the large Red and Yellow Strasburg. The onion best adapted to general cultivation, is the tree or button onion. These buttons should be planted in drills as directed for seed, with the apex just even with the surface. If the soil is not sufficiently rich, the onions when planted may be covered with well rotted manure, ashes or hen dung, well mixed with virgin soil. They should be permitted to grow on top of the ground as much as possible. They require a sunny exposure.

To preserve onions through the winter, they should be taken from the ground shortly after the tops die, and spread in the shade until they are thoroughly dry, and then spread on a dry loft where they will not freeze.

Cabbage.

This is an important vegetable, and almost indispensable as a culinary in every family. It is more remarkable for its strengthening than for its nourishing qualities. It requires a rich and deeply pulverized soil. New land is not so suitable as old ground well manured. Well rotted stable manure if thoroughly incorporated with the soil is found to answer well. Ashes, lime, bone dust, or salt, at the rate of eight bushels to the acre, are excellent manure. I once dug a cellar and scattered the clay which came out of it over a piece of ground, where I

intended to plant cabbage, I ploughed deeply, mixing the clay thoroughly with the soil. The result was, that I never had as fine cabbage as I raised on that piece of ground.

Cabbage being a very succulent plant is a great exhauster of the soil. Scarcely any thing will grow well after cabbage. For an early crop, the early York and large York should be sown in a hot bed, in February; and when large enough transplanted in the open ground. They are very liable to be destroyed by the cut-worm. To prevent this, if the ground has not been salted, throw it in ridges two feet apart, and plant in the ditches. It is said that the worms will not come down from the ridge to the plants. As the plants grow the ground should be leveled.

For a late crop sow the flat Dutch or Drumhead, about the first of April to the middle of May, in the open ground. Plant in the same way, only allow more room, making the rows three feet apart. Previously to drawing the plants from the ground, let them be well watered so that they will draw easily, and retain the mould about the roots. Plant in a cloudy day, or in the evening, and if dry give them a watering. A good plan would be to make a lob-lolly of rich soil and water, and a little salt in which immerse the roots before planting. This will preserve moisture, and prevent the cut-worm. If planted in the ditches, gradually draw down the ridges as they grow. The under leaves should not be taken off, or they will not head so well. Cabbage more than anything else requires the soil to be stirred about them. If this were done every day, particu-

ularly in the morning when the dew is on, the better. If the cabbage worm should prove troublesome pull off a leaf and put it on the head, in the evening and in the morning it will be found that most of the worms will have collected on the leaf, and can easily be shaken off in a vessel of soap suds.

The best method of preserving cabbage through the Winter is, to dig a trench deep enough to contain the roots and stocks and wide enough for three or four heads. Place them as close as possible. Then place a pole or poles lengthwise over the centre, supported by forks a few inches above the cabbage. Then place boards on both sides as directed for potatoes, cover the boards with straw five or six inches, then cover with dirt and if a shelter is made over this the better. The ends may be left open unless very cold. This is better than a cellar, and will keep well, and even improve through the winter.

Cabbage when boiled is not good for dyspeptics or persons of sedentary habits, but for laboring persons it is excellent. Made into sour crout, it is very convenient for winter use, and is relished by most persons, and is perhaps more wholesome than any other way of preparing it. Cabbage is an excellent food for cows and hogs; though if milch cows are fed with it, it imparts an unpleasant flavor to the milk.

The Watermelon.

Although the Watermelon does not contain a great deal of nourishment, it is nevertheless one of the most agreeable, cooling, and refreshing fruits that can be cultivated. It comes too, when our system seems to

require something of a cooling and refreshing nature.

The watermelon requires a deep, rich, sandy soil to bring it to perfection. When this soil is not in a natural state it may be obtained by art. We have always observed that the best melons are raised on new ground.

Hence we may infer that soil taken from the woods—a rich leaf mould—and put in the hill will answer every purpose.

Break up the soil as deep as you can early in the spring. Then lay it off ten feet square, and at the point of intersection make holes eighteen inches or two feet deep, and the same in width, and fill up with the virgin soil, finishing with a little hill above the surface. Make it level on top or a little, dished so as to retain the water, and plant the seed from the middle of April to the middle of May. In this way the finest watermelons may be raised on the poorest ground you have. If the striped bug should prove troublesome sprinkle dry ashes, or air slacked lime over them in the morning when the dew is on: or place four nine inch brick around them, over which place a pane of glass; this will protect them from the frost as well as from the bug. Let not more than two remain in a hill, and as soon as the vine begins to run pinch off the top bud. This will make it bear sooner and more abundantly. But if you want your melons of extra size, let not more than one or two grow on the same runner. Old seed is better than fresh.

Rise early to your business, learn good things, and oblige good men; these are three things you shall never repent.

FACTS RELATING TO BUTTER MAKING.

Milk as it comes from the cow is about blood-heat, or 98° Fah. It should be cooled off as little as possible before coming to rest. With this object in view, the pails may be rinsed with hot water before milking, and the distance from the place of milking to the milk-room should be as short as possible; but, even with all these precautions, the fall in temperature will be considerable.

From what has already been said with regard to the manner in which the cream or oily particles of the milk rise to the surface, and the difficulty of rising through a great space, on account of their intimate entanglement with the cheesy and other matters, the importance of using shallow pans must be sufficiently obvious.

To facilitate and hasten the rising of the butter or oily particles, the importance of keeping the milk-room at a uniform and pretty high temperature will be equally obvious. The greatest density of milk is at or near the temperature of 41° Fah.; and at this point the butter particles will, of course, rise with the greatest difficulty and slowness, and bring up a far greater amount of cheese particles than under more favorable circumstances. These caseous and watery matters, as has been already stated, cause the cream or the butter to look white, and to ferment and become rancid. To avoid this, the temperature is generally kept, in the best butter-dairies, as high as from 58° to 62°. Some recommend keeping the milk at over 70°, and from that to 80°, at which temperature the cream, they say, rises very rapidly, especially if the depth through which it has to rise is but slight. But that, in the opinion of most practical dairymen, is too high.

To obtain the greatest amount of cream from a given quantity of milk, the depth in the pan should, it seems to me, never exceed two inches. A high temperature and shallow depth,

as they liquify the milk and facilitate the rising of the particles, tend to secure a cream free from the cheesy matter, and such cream will make a quality of butter both more delicate to the taste, and less likely to become rancid, than any other.

It has already been intimated, in another connection, that neither the largest quantity nor the best quality of milk is given by the cow till after she has had two or three calves, or has arrived at the age of five or six years. It may also be said, what cannot fail to have attracted the attention of observing dairymen, that in very dry seasons the quantity of milk yielded will generally be less, though the quality will be richer, than in moist and mild seasons.

Hence it may be inferred that moist climates are much more favorable to the production of milk than dry ones; and this also has been frequently observed and admitted to be a well-known fact. From these facts it may be stated that dry and warm weather increases the quantity of butter, but it is also true that cooler weather produces a greater amount of cheese. A state of pregnancy, it is obvious, must reduce the quality of the milk, and cause it to yield less cream than before.

In the treatment of milk the utmost cleanliness is especially requisite. The pails, the strainers, the pans, the milk-room, and, in short, everything connected with the dairy, must be kept neat and clean to an extent which few but the very best dairywomen can appreciate. The smallest portion of old milk left to sour in the strainers or pans will be sure to taint them, and impart their bad flavor to the new milk put into them. Every one is familiar with the fact that an exceedingly small quantity of yeast causes an active fermentation. The process is a chemical one, and another familiar instance of it is in the distillation of liquors and the brewing of beer, where the malt creates a very active fermentation. In a similar

manner the smallest particle of sour milk will taint a large quantity of sweet.

The milk-room should be removed from dampness, and all gases which might be injurious to the milk by infecting the atmosphere. If the state of the atmosphere and the temperature, as has been stated, affect it, all contact with foreign substances to which it is liable in careless and slovenly milking, and all air rendered impure by vegetables and innumerable other things kept in a house-cellar, will be much more liable to taint and injure it. Milk appears to absorb odors from objects near it, to such an extent that a piece of catnip lying near the pan has been known to impart its flavor to it.

Milk, as sold in most large cities, is often adulterated to a great extent, but most frequently with water. Not unfrequently, too, a part of the cream is first taken off, and water afterwards added; in which case the use of burnt sugar is very common for coloring the milk, the blueness of which would otherwise lead to detection. The adulteration of pure milk from the healthy cow by water, though dishonest, and objectionable in the highest degree, is far less iniquitous in its consequences than the nefarious traffic in "swill-milk," or milk produced from cows fed entirely on "still-slops," from which they soon become diseased, after which the milk contains a subtle poison, which is as difficult of detection by any known process of chemistry as the miasma of an atmosphere tainted with yellow fever or the cholera. The simple fact is sufficiently palpable, that no pure and healthy milk can be produced by an unhealthy and diseased animal; and that no animal can long remain healthy that is fed on an unnatural food, and treated in the manner too common around the distilleries of many large cities.

C. L. Flint.

WHERE love is there is no labor, and if there is labor, the labor is loved.

INDUSTRY AND ECONOMY IN FARMING,

There is nothing more necessary to success in the business of farming, than industry and economy. Without these no farmer should expect to succeed. His lands may be rich and fertile, he may understand the theory of cultivation; he may have hands sufficient and implements, and all the means necessary for carrying on his business successfully, but he fails; and why? Simply for the want of industry and economy. He either neglects his business, or he is extravagant in his expenditures.

Every farmer who has the means, ought to do a thriving business; and and if he does not, the fault is in himself. There are few occupations that are more profitable than farming, if it is properly managed. It is true, a man may sometimes accumulate more rapidly for a time, at some other business; but the farmer's progress if slow, is sure, and steadily increasing and in the end, is, perhaps, the surest means of attaining to wealth and prosperity. There is no man so independent as the farmer. If there is a man on earth that is sure of a comfortable support, it is the farmer. The merchant, the manufacturer, and the wealthy speculator may fail, but the farmer will have enough and to spare.

When banks fail, and those engaged in the most thriving business, are obliged to suspend operations, the farmer is secure—he feels not the shock—the soil he cultivates is his bank—there he has his money deposited, and it never fails under ordinary circumstances to yield him a rich per cent. per annum. These are

not visionary phantoms—facts abundantly demonstrate that the farmer is the most happy, prosperous, and independent man. If his coffers are not always filled with gold and silver, yet his table is richly furnished with the choicest and most substantial provisions—he has enough to eat and to wear, and what more should a man desire in this world!

But although the farmer has it in his power to be prosperous, yet we find that all are not so. And why? The fault is not in the nature of his calling, but in the want of proper management.

The farmer in order to succeed, must have judgment to plan, and a will to execute whatever is necessary to be done on the farm. No man should engage in this business, or indeed in any other, unless he turns his whole attention to it, and brings all his energies to bear on that single point.

The farmer should never attempt to do too many things at the same time, if he does, the probability is that his work will be badly done. Do one thing at a time—that which is most necessary, of course—and do it well. There is always a right time and a right way of doing a thing, and the farmer should know when and how to do his business in the best possible manner. He should always be before hand with his work, for if he have anything undone at the proper time, his business will accumulate on his hands, and to get through he must either leave some things undone or do them in a hurried manner, and of course such things are never well done. This is a great fault amongst farmers, they are too apt to put off

till to-morrow what ought to be done to-day, not considering that every day will have its own business to be attended to.

If the farmer has land to be cleared or to be broken up, or fences to make, or house to build, wood to get, or implements to make or repair, let him do it in the Winter before the busy season comes on, when he must attend to the planting and growing of his crops. The farmer if he knows his own interest and does his duty, will find but few idle days. He will have something to do in his barn or stable, or house or shop, even in days when he could not be out of doors. It seems as if Winter was designed for farmers to do their preparatory work.

Having made all the necessary preparations during Winter, the farmer is ready to commence operations in the Spring as soon as the weather opens up. He takes advantage of the season and plants or sows his seed in time. He knows from experience that much of his success depends on his early crops, which in our climate are most likely to suit the season and turn out better than late planted crops, and are more easily tended—the grass and weeds do not get the start of the corn.

Now comes a busy time for the farmer. Nature goes apace and will not wait one hour for the loiterer. If the corn does not grow the weeds will. The God of nature has decreed that man shall live by the sweat of his face. Every thing valuable is obtained by labor and industry. The latent spark is in the flint, but is brought out by concussion—there is treasure in the earth, but it is obtained by hard labor. The farmer must

cultivate his crops. He must rise early; he must plough and hoe, and do all he can to promote the growth of his crops in the proper season. Industry in farming is indispensable. Without it no one can succeed. There is much truth in the old quaint verse of Franklin:

"Plough deep while sluggards sleep,
And you'll have corn to sell and to keep."

See how nature smiles around the farmer, as if to cheer him in his arduous labor—the birds sing, the flowers bloom, and fill the air with their sweet fragrance, the earth is clothed with green, and the trees put forth their leaves. Nature invites him to his work, and offers to assist him in his toil. The sun shines and the genial showers fall and refresh his growing crops. If the farmer has his trials, he has also his joys and his pleasures. His labor gives him health and appetite, and he eats his food with a relish unknown to the man that labors not. His sleep also is sweet and refreshing, and he realizes the truth of the proverb which says, "The sleep of the labouring man is sweet." He is also buoyed up and cheered amidst all his labor with the hope of success. There is nothing so gratifying to the farmer as to see his crops flourishing and promising to reward the labor of his hands. It is to the negligent and slothful only, that labor is irksome and hard; to the industrious it is easy and pleasant. Let farmers bestir themselves, let them attend to their business with diligence and perseverance, and then they will have every reason to believe that their labors will be crowned with success. Let them

wipe off the odium that is too often attached to their occupation.

The business of farming is already beginning to be appreciated; and farmers have it in their power to make their occupation not only the most popular but the most profitable that can be followed. It will hold true in this, as in every other respect, that "The hand of the diligent maketh rich."

But we find that it sometimes happens that farmers with all their industry and close application to business, do not prosper. Well, this is sometimes the case we admit, but it is no more applicable to farmers than it is to other occupations. But let us inquire into the cause of this, for no doubt there is a cause for it.

Farmers in order to succeed in their business, must be economical as well as industrious. Sometimes a farmer may work hard and be diligent in his business, but he does not plan or manage his farm in the best manner, nor does he economize, or save what he makes. There is as much depends on saving what we make as in making it. A farmer as well as men of all other occupations should have system in all he does. Without this, however industrious he may be, he will labor to a disadvantage. He may do a thing which is not absolutely necessary to be done at the present time, and leave something undone which ought to be done now. There is always a proper time for doing a thing, as well as a proper way of doing it, and everything should be done in its proper time, always doing first that which is of the most importance.

It would be a good plan for a far-

mer to have his ground laid off into four, five or six lots, according to the number of years he wishes to have a succession of crops, and then plant or sow a different crop in each lot every year, until he gets through all his lots. In this way the soil would have an opportunity of recovering from the exhaustion made by the preceding crop. By this means the soil would be preserved and his crops, far superior. A rotation of crops cannot be too strongly insisted upon.

The beneficial effects of this system are so well understood at the present time, that no judicious person will think of adopting any other course. It is indispensable to success.

We have known some farmers who were quite liberal in laying in a good supply of implements, or farming utensils; but acted very uneconomical in the use and treatment of them. They would have no house or shelter in which to deposit them when not in use; you might find a plough here, and a hoe there, exposed to all the injurious influences of the weather, and never thought of or cared for until wanted again. Then considerable time would be wasted in the search, and when found were not only out of order but very much injured by their exposure. The result of this is, besides the unnecessary waste of time the instrument will not last half as long, and then the expense of furnishing new ones is no small item to the farmer. Who does not see that this will be a considerable drain on the farmer's income. And this is all the consequence of bad economy.

Every farmer who expects to succeed must take care of his earnings. Let nothing go to waste or be un-

necessarily exposed to injury. Be careful even of small matters, or as the saying is, "Take care of the pence and the pounds will take care of themselves." Every farmer should have a shop or shelter for his tools, and when not in use should see that they are in their proper place. He should remember the old saying and practice upon it. "There should be a place for everything, and everything should be in its place." The observance of this rule may seem to be of little moment, but rest assured it will amount to something considerable in the course of a year.

There is another fault among farmers, which shows the want of economy, and is a great drawback in the way of a farmer's success, viz: not taking care of their crops, or gathering them in at the proper time. Some farmers seem to think, if we may judge from their practice, that all that is necessary is to raise a good crop, without trying to secure it after it is raised. Of the two faults, not trying to make, and not trying to save, I think the later is much the worse, as it more evidently discovers a want of thought and good economy. Besides if a man does not intend to take care of his crops after they are raised, it would save a great deal of labor not to raise them at all. I have known some farmers after raising fine crops of oats, rye, wheat &c., permit them to remain in the shock after harvest until entirely ruined, or so badly injured as not to be worth half their value. Sometimes also, corn and cotton are permitted to remain in the field, until it is half roasted. All such management as this is ruinous to the farmer's interest, and under

these circumstances he cannot expect to prosper. It is admitted that sometimes owing to inclement weather, crops cannot be secured in as good order as they should be; but if farmers are as careful and industrious as they ought to be, they can always have their crops stored away in pretty good order. It requires as much diligence, and sometimes even more, to save our crops as to make them.

Another great hindrance in the way of a farmer's prosperity, is the want of economy in his expenditures. This however is not peculiar to the farmer, but is common to persons of every profession. No one whether farmer or not, can expect to prosper as long as his expenses exceed his income. It would be well for every farmer to keep an exact account of all he makes, and of all he spends, and he will find that just in proportion as his income exceeds his outlays, in the same proportion will he increase in wealth and prosperity.

It is possible however, that under some circumstances a man may be a gainer by going in debt a certain extent. For instance, if a man has not land enough, or houses, or means to carry on his farming operations successfully, and he had not the means to pay at the present time, it might be to his interest to purchase on credit, provided he had good reason to believe he could meet the payment when due. But a good rule is *never to run in debt*. This is the ruin of thousands. Better to do without an article you think you need than to run the risk of going in debt. We are apt to think we need a great deal more than we do in reality. Our

real wants are few, but our imaginary wants are many. It is wonderful how little we can live on, if brought to the necessity of a trial. Never make accounts in a store or elsewhere, if it can possibly be avoided, they always exceed our expectations at the end of the year.

But while recommending frugality and economy in all our expenditures, I would not be understood as encouraging parsimony or niggardliness. Many no doubt make strict economy an excuse for their miserly conduct; but there is in reality a great difference between the two. The miser denies himself the comforts and often the necessities of life, and withholds what he ought to spend, while the economist saves what he ought to save, and spends what he ought to spend, having in view his own comfort and happiness, as well as the comfort and happiness of those around him.

The farmer will have many demands upon his charity, and this he keeps in view as one of his necessary expenses. He is never backward as far as his circumstances admit to contribute to worthy and charitable objects, he considers it his duty to do so, and experience has convinced him that he loses nothing by so doing. "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, and it tendeth to poverty."

The farmer often loses much by not having the necessary preparations. Although it does not require as much capital to commence the business of farming as some other occupations, yet there are many preparations to be made, before a man can be suc-

cessful even in farming. He must have good fences to protect his crops, and he must have barns, stables and cribs, in which to store them away in safety, when made. In consequence of not having these necessary things, the farmer is in danger of losing the labor of his hands. No farmer would like to have his crops destroyed by his neighbor's stock, after being at the trouble of cultivating them all the year. Then let him have good fences. This will not only be the means of saving his crops, but much bad feeling towards his neighbor. And where would be the wisdom of laboring hard to raise fine crops, and have no where to put them when raised? Then let him have the necessary houses or barns. You say, all this requires so much labor and expense! Then give up the business. Every calling has its own peculiar trials; and a man must expect to meet these trials, let him engage in what business he will, if he expects to succeed. Every man should count the cost before he engages in any business. To be a successful farmer requires much energy, unwearied industry, and strict economy; and the man who brings these into exercise will be sure to succeed; if not, he must expect to be under the weather all his days, and die a poor man.

Some farmers are in the habit of holding back their produce from market, expecting to get a better price for it after a while. In some instances they may succeed; but as a general rule the policy is not good. When the market first opens up, there is a greater demand for an article, and more buyers, and better prices offered, than at any time afterwards.

Besides, the products of a farm when stowed away, are liable to many injuries and so often in the way, that it is the interest of the farmer to dispose of them as soon as possible, even if he should not get quite so much for them, unless he has good evidence to believe that the market will improve sufficiently to compensate him for the loss he might sustain by wastage, &c.

Another great mistake among farmers, and one which operates much to their injury, is, they undertake more than they can accomplish well. There is much good sense as well as economy in the old saying, "Whatever we do, we should do well." This will apply, with great force, to any department of labor, but especially to the farmer. If it is important then that a farmer should do his business well, it is equally important that he should undertake no more than he can accomplish in the best manner. This will not only save labor, but in the end be much to his interest. It is a great mistake that he who cultivates the most ground raises the most produce, or makes the most money. One acre well cultivated, will produce more than double of one cultivated in the ordinary way. This is a fact which cannot be too strongly impressed on the mind of the farmer. Cultivate less, and do it well, and you will make more.

Another disadvantage under which the farmer often labors is, that he keeps too much stock. A farmer should make it a rule, from which there should be no departure, never to keep more stock than he can make profitable. It will be a great drain upon his income. Every horse, cow,

or hog, should be made to earn what it consumes; if not, the farmer loses it, and it is a clear loss.

In conclusion we would say, let the farmer be industrious, let him be economical, let him feed his ground well, and it will be sure to feed him. And if he does not grow rich, he will, at least, arrive at the golden mediocrity, which is far preferable.

MILK.

MILK, as the first and natural food of man, has been used from the remotest antiquity of the human race. It is produced by the females of that class of animals known as the *mammalia*, and was designed by nature as the nourishment of their young; but the richest and most abundant secretions in common use are those of the cow, the camel, the mare, and the goat. The use of camel's milk is confined chiefly to Africa and to China, that of mares to Tartary and Siberia, and that of goats to Italy and Spain. The milk of the cow is universally esteemed.

Milk is an opaque fluid, generally white in color, having a sweet and agreeable taste, and is composed of a fatty substance, which forms butter, a caseous substance, which forms cheese, and a watery residuum, known as serum, or whey, in cheese-making. The fatty or butyraceous matter in pure milk varies usually from two and a half to six and a half per cent.; and the serous matter, or whey, from eighty to ninety per cent.

To the naked eye milk appears to be of the same character and consistency throughout; but under the microscope a myriad of little globules of varied forms, but mostly round or ovoid, and of very unequal sizes, appear to float in the watery matter. On more minute examination, these butter-globules are seen to be enclosed in a thin film of caseous matter. They are so minute that they filter through the finest paper. Milk

readily assimilates with water and other sweet and unfermented liquids, though it weighs four per cent. more than water. Cold condenses, heat liquifies it.

The elements of which it is composed, not being similar in character or specific gravity, undergo rapid changes when at rest. The oily particles, being lighter than the rest, soon begin to separate from them, and rise to the surface in the form of a yellowish semi-liquid cream, while the greater specific gravity of the serous matter, or whey, carries it to the bottom.

A high temperature very soon develops acidity, and hastens the separation of the cheesy matter, or curd, from the whey. And so the three principal elements are easily distinguished.

But the oily or butyraceous matter, in rising to the surface, brings up along with it many cheesy particles, which mechanically adhere to it, and give it more or less of a white instead of a yellow color; and many watery or serous particles, which make it thinner, or more liquid, than it otherwise would be. If it rose up free from the adhesion of the other elements, it would appear in the form of pure butter, and would not need to undergo the process of churning to separate it from other substances. The time may come when some means will be devised, either mechanical or chemical, to separate the butter particles from the rest instantaneously and completely, and thus avoid the often long and tedious process of churning.

The coagulation, or collecting together of the cheesy particles, by which the curd becomes separated from the whey, sometimes takes place so rapidly, from the effect of a great heat, or sudden changes in the atmosphere, that there is not time for the butter particles to rise to the surface, and they remain mixed up with the curd.

Nor does the serous or watery mat-

ter remain distinct or free from the mixture of particles of the cheesy and buttery matters. It also holds in suspension some alkaline salts and sugar of milk, to the extent of from three to four per cent. of its weight.

* * *

It may be stated, in other words, that milk is composed chiefly of caseine, or curd, which gives it its strength, and from which cheese is made; a butyraceous or oily substance, which gives it its richness; a sugar of milk, to which it owes its sweetness, and a watery substance, which makes it refreshing as a beverage; together with traces of alkaline salts, from whence are derived its flavor and medicinal properties; and that these constituents appear in proportions which vary in different specimens, according to the breed of the animal, the food, the length of time after parturition, etc.

Milk becomes sour, on standing exposed to a warm atmosphere, by the change of its sugar of milk into an acid known as lactic acid; and it is owing to this sugar, and the chemical changes to which it gives rise, that milk is susceptible of undergoing all degrees of fermentation, and of being made into a fermented and palatable but intoxicating liquor, which, by distillation, produces pure alcohol. This liquor is extensively used in some countries. The arrack of the Arabs is sometimes made from camel's milk.—*C. L. Flint, Sec. Mass. Board of Ag., on Milch Cows and Dairying.*

MORE FACTS ABOUT MILK.

Milk is exceedingly sensitive to numerous influences, many of which are not well understood. It is probably true that the milk of each of the divisions of the udder differs to some extent from that of the others in the same animal; and it is well known that the milk of different cows, fed on the same food, has marked differences in quality and composition.

But food, no doubt, has a more powerful and immediate effect than anything else, as we should naturally suppose from the fact that it goes directly to supply all the secretions of the body. Feeding exclusively on dry food, for instance, produces a thicker, more buttery and cheesy milk, though less abundant in quantity, than feeding on moist and succulent food. The former will be more nutritive than the latter.

Cows in winter will usually give a milk much richer in butter and less cheesy than in summer, for the same reason; while in summer their milk is richer in cheese and less buttery than in winter. As already intimated, the frequency of milking has its effect on the quality. Milking but once a day would give a more condensed and buttery milk than milking twice or three times. The separation of the different constituents of milk begins, undoubtedly, before it leaves the udder; and hence we find that the milk first drawn from the cow at a milking is far more watery than that drawn later, the last drawn, commonly called the strippings, being the richest of all, and containing from six to twelve times as much butter as the first.

Many other influences affect the milk of cows, both in quantity and quality, as the length of time after calving, the age and health of the cow, the season of the year, etc. Milk is whiter in color in winter than in summer, even when the feeding is precisely the same. At certain seasons the milk of the same cow is bluer than at others. This is often observable in dog-days.

The specific gravity of milk is greater than that of water, that of the latter being one thousand, and that of the former one thousand and thirty-one on an average, though it varies greatly as it comes from different cows, and even at different times from the same cow. A feeding of salt given to the cow will, in a few hours, cause the specific gravity of

her milk to vary from one to three per cent.

Milk will ordinarily produce from ten to fifteen per cent. of its own volume in cream; or, on an average, not far from twelve and a half per cent. Eight quarts of milk will, therefore, make about one quart of cream. But the milk of cows that are fed so as to produce the richest milk and butter will often very far exceed this, sometimes giving over twenty per cent. of cream, and in very rare instances twenty-five or twenty-six per cent. The product of milk in cream is more regular than the product of cream in butter. A very rich milk is lighter than milk of a poor quality, for the reason that cream is lighter than skim-milk.

Of the different constituents of milk, caseine is that which most resembles animal matter, and hence the intrinsic value of cheese as a nutritive article of food. Hence, also, the nutritive qualities of skimmed milk, or milk from which the cream only has been removed, while the milk is still sweet. The oily or fatty parts of milk furnish heat to the animal system; but this is easily supplied by other substances.

From the peculiar nature of milk, and its extreme sensitiveness to external influences, the importance of the utmost care in its management must be apparent; and this care must begin from the moment when it leaves the udder, especially if it is to be made into butter. In this case it would be better, if it were convenient, to keep the different kinds of milk of the same milking by itself—that which comes first from the udder, and that which is drawn last; and if the first third could be set by itself, and the second and third parts by themselves, the time required to raise the cream of each part would doubtless be considerably less than it is where the different elements of the milk are so intimately mixed together in the process of milking, after being once partially separated, as

they are before they leave the udder.

After milking, as little time as possible should elapse before the milk is brought to rest in the pan. The remarks of Dr. Anderson on the treatment of milk are pertinent in this connection. "If milk," says he, be put into a dish and allowed to stand until it throws up cream, the portion of cream rising first to the surface is richer in quality and equal in quantity to that which rises in a second equal space of time; and the cream which rises in a second interval of time is greater in quantity and richer in quality than that which rises in a third equal space of time. That of the third is greater than that of the fourth, and so of the rest; the cream that rises continuing progressively to decrease in quantity and quality, so long as any rises to the surface.

"Thick milk always throws up a much smaller proportion of the cream which it actually contains than milk that is thinner, but the cream is of a richer quality; and if water be added to that thick milk, it will afford a considerably greater quantity of cream, and consequently more butter, than it would have done if allowed to remain pure; but its quality at the same time is greatly deteriorated.

"Milk which is put into a bucket or other proper vessel, and carried in it to a considerable distance, so as to be much agitated and in part cooled before it be put into the milk-pans to settle for cream, never throws up so much or so rich a cream as if the same milk had been put into the milk-pans, without agitation, directly after it was milked."—*Ibid.*

SHOULD CORN BE PLANTED IN DRILLS?

"More corn can be grown on a less number of acres, with thorough culture, if planted in drills."

So says one of our best Agricultural Journals. We do not believe a word of it.

If you cultivate a very large kind,

put the hills four feet apart each way; if a medium kind, put them four feet one way and three feet the other; if quite a small kind, three feet each way. Put from four to six kernels in a hill, thin two, three or four, and you will get as much corn as the land is capable of producing.

But the corn is already planted for this year, and now is the time to be cultivating. The Journal, that so mistakenly, as we think, advises to drill corn, says better things about its cultivation, as follows:—

One of the most important essentials to a good crop, after good soils, is thorough cultivation. The weeds must be kept down, the soil must be stirred. In order to succeed in the mastery of the former, cultivation should commence before the corn is up, if necessary. The most successful corn growers harrow the ground *before* the corn appears or about the time of its appearance. The advantage gained fully compensates for any loss that may occur by rooting it up. Indeed, there is much less danger than the tyro anticipates. *Keep the weeds down.* Thorough culture, frequent stirring of the soil is a fundamental doctrine in the creed of the successful corn culturist. He needs no long written detailed scientific theory of the habits and requirements of the plant to convince him either. The golden harvest satisfies him. Then we need not waste time and space in an elaborate treatise upon the necessities of the corn plant, but warrant a sure return for all labor expended in its thorough tillage.

We doubt about cultivating before the plants are up, or quite as soon as they appear; but too much cannot be

said of the importance of perfectly clean cultivation from the time it is fairly out of ground till the 10th, 15th or 20th of July, after which the benefit of longer fighting the weeds will not more than counterbalance the injury to the roots of the corn.

ARRANGEMENT OF TREES IN ORCHARDS.

MR. EDITOR:—It has frequently occurred to me that much land is wasted which would be saved if the idea was presented to the minds of farmers and gardeners. It is in this way: If a farmer wishes to plant an orchard, and wishes the trees to stand any certain distance apart, say thirty feet, the usual practice is to plant the trees in rows thirty feet apart, and the trees separated in the rows by the same distance, and forming squares. Now if the above distance from tree to tree is desired, and the trees are planted as above, one acre will accommodate forty-nine trees thirty feet apart in the rows, and a fraction over forty-two, feet diagonally; but if the rows are twenty-six feet apart, and the trees planted thirty feet apart in the rows, and the trees of one row planted opposite the spaces of the next row, the acre will accommodate fifty-six trees thirty feet apart in every direction. The same principle holds good for cabbage and other plants, and for other desired distances.

MARKET FAIRS TRIED.

FRIEND NASH.—I have the favor of your Magazine for May 1859, and am pleased to find therein sound instruction, on the culture of the onion, from

that indefatigable collector of fact, O. Judd Esq. I have heard his publications highly prized by many fully competent to appreciate their merits. So far as I have seen them, I think favorably of them. I hope hereafter to be able to examine them with more care—though as years advance I find my eyes give out. I believe mine have been in service longer than yours.

You speak of the market fairs of England;—and of the benefit that may accrue from such markets or fairs in this country. What you have dimly seen in imagination, we are beginning to see in reality. On Tuesday 3d of May, a market was held at this place, under the directions of a committee, of which Messrs Fay, Sutton, Loving and Allen were members—the result of which surpassed the most sanguine expectations of the best friends of the enterprise. Several thousands of persons was present from all parts of Essex, and adjoining Counties; many sales and exchanges of animals were made on advantageous terms. I saw one pair of fat cattle, only six years old, reared and fed on a small farm in Hamilton, that sold for \$300 each, or \$10 a hundred, at the option of the buyer. Several other pairs of less weight sold at the same rate, cows sold from \$40 to \$80 according to fancy or quality. Horses sold for what they were worth—fast horses find no favor among our sober farmers—and we have few that are otherwise in these temperance times. I have one neighbor, who yesterday morning took a glass of corrosive sublimate prepared for bed bugs, mistaking it for rum; a few such checks will be an effectual cure for

drunkenness. The sooner such insatiable appetites are cured the better.

Very truly yours,

J. W. PROCTOR.

So. DANVERS, *May 10, 1859.*

THE SEASON AND THE CROPS.

The season is called backward, yet so far as present indications are concerned, they give promise of a fruitful year. It has become a proverb, that "A wet and cold May, will give an abundance of hay." It would seem the month has been sufficiently cold and wet to guarantee the fulfillment of this old proverb. Fruit blossoms give promise of a plentiful harvest, but such indications have of late years, so often disappointed the expectations of orchardists, that blossoms have long since ceased to be a sure sign of a fruit crop.

Formerly, apples were abundant over the older New England States, but of late have become scarce and difficult to grow. This is owing probably to the exhaustion of the elements in the soil necessary to make fruit. If a farmer would produce wheat, he must sow his seed in soil that contains the mineral elements necessary to make wheat, otherwise he will fail of a crop. So of apples, and other products. Agricultural chemistry has confirmed the doctrine that plants, like animals, must be duly fed and nourished.

Wheat and rye like grass, look promising.

The wet cold turn for the past two weeks, will delay planting somewhat in undrained lands, this demonstrates the necessity of thorough underdraining.

Boston, *May 23d, 1859.*

DITCHING.—HORSE HOES.

MR. NASH:—In your May No., on ditching, you have made some practical remarks on W. K.'s communication, —all of which I regard as good, and yet simple of construction. That ditches may be laid out without engineers I have no doubt. You did not mention one thing that is used with us, and which we call a water level. Its simplicity and value I regard highly. If you think it worthy a place in your list of simples you can have it.—

Take a tin tube two feet long and two inches in diameter, closed at each end. In the centre is a socket put on for your Jacob staff. On the top, close to each end is a hole large enough for a two oz. vial to be put in. Around these holes solder pieces forming cups extending up one and a half inches. Insert your vials with the bottom out, stopping the leak with putty. Fill the tube with water until the vials get as full as you wish, sighting from the top of the water, (and if the water is colored the better.) The excellency of this level is, turn it as you may you cannot get it out of level.

How can I get one of Knox's horse hoes?—if they answer well I should like to have a half dozen.

Respectfully yours,

TAYLOR'S DEPOT, } WM. J. JONES.
Lafayette Co. Miss. }
May 24, 1859.

We presume our correspondent will find the article he enquires for in the larger agricultural warehouses of his own State. It is manufactured by Ruggles, Nourse, Mason, & Co. in Boston, and could be had of them of

course, if not to be had nearer. The price, if we recollect rightly is \$7 with steel teeth, (rather shares) and \$5 with shares of cast iron. For sandy soils the latter one is nearly as good. For those abounding with vegetable matter, as in many of the Western prairies, the steel share should be preferred, even if the difference in price were three times as great as it is.

FERTILIZERS.

The *Farmer & Planter*, an exceedingly promising monthly, now in its fifth No., vol. I., at Columbia, S. C., has an article on farming in general, by "an Old Grumbler," of such a character as makes us wish there were a good many old grumblers if they would all grumble as good naturedly and as sensibly as he does.

"Guano," he says, "is a fashion, and like all others afflicting humanity, it is an expensive fashion." He adds:

It is valuable, as an immediate productive stimulant; but its effects so frequently fail, from the vicissitudes of the seasons, that we conscientiously believe *its fashion* will wear out. The great objection to guano is, that it leaves no tangible impress upon the condition of the soil. A barren field manured with guano, to all appearance is a barren field forever. It blackens no red hills—it fills up no cankering gullies—it adds no consistency to shifting sands—it furnishes elements for the production of a single crop, and leaves only a trace of fertility behind. The destiny, then, of guano is to produce a single crop, and unless economy and discretion in composting follow its use, it will prove ruinously extravagant.

This is just about what we have long believed and said of guano;

and yet, believing, as we do that it is an excellent fertilizer, and will pay if purchased discriminately and applied judiciously, and that all that is wanted is, that it should be had at a *fair* and not at an *exorbitant* price, we would not at this moment, especially as there is now a prospect of an enlarged foreign demand for our produce, wholly discourage its use.

But we will take the liberty to repeat a fact or two from a late number of this work, concerning the trade. It will be understood of course, that when we speak of guano without a prefix, we mean Peruvian Guano. The facts about it are these ; 1. It is a most valuable fertilizer ; 2. It costs the importer at the Chincha Island just about \$15 a ton, as duty to the Peruvian government, and the cost of lading ; 3. It costs the farmer here \$60 a ton ; 4. Somebody between there and here gets \$45 on each ton ; 5. This is just about \$25 a ton more than the middle man ought to have, or would have if commerce and agriculture could "hoe their rows" equally well, or in other words, if there could be a fair division of the profits.

With regard to another class of manures, the writer from whom we have before quoted says :

The phosphatic compounds, now used so largely by planters, have a more lasting fertility. The decomposed bones, claiming to enter largely into their composition, impart immediate fertility; and, differing from gaseous fertilizers abounding in ammonia, continue to yield nutrition until, by a slow process, they are entirely absorbed by the productions of the soil. Their fertilizing benefit running thus over several growing seasons, is more apt to be remunerative, and,

after the first dose, each succeeding annual application might with reasonable certainty be decreased. The tendency of phosphatic manures to produce heavy crops of grass, and leguminous plants, adds vastly to the supplies of vegetable matter for subverting in a green state, or material for the compost heap. These are the advantages of fashionable commercial manures. Their disadvantages can only be brought home to the planters, by showing them how they can dispense with their use, in a great measure, and make more remunerating crops, because the home-made compost is a clear gain, costing no outlay but care and labor, and, by adding permanent fertility to their soils, adds capital to their landed interests: •

The above is the kind of talk that we like. If the farmer can buy guano, phosphatic manure, such as the cheaper guanos, bone dust, &c., and other portable fertilizers, at rates that will leave him a profit, let him buy them. We would not frighten him from it, nor would we advise him to be frightened by anybody's story, but to try for himself and judge independently.

But "Old Grumbler" grumbles very much to our liking, when he shows, as we wish we had space to quote, that the droppings of the animals, composted and finely divided with such vegetable and mineral matters as the farm itself, or its immediate neighborhood affords, must of necessity be the farmer's main dependence.

We here repeat what we have often said, but not too often, that money paid for labor, to preserve, manipulate and work up to the best advantage the home fertilizers, goes twice as far in fertilizing the

land, as that paid for manures far fetched and paid for by the *pound* instead of being tumbled into the soil by the *hundred tons*.

"HE'S NOTHING BUT A FARMER."

The injunction from Jehovah to fallen man was, "Thou shalt eat the *herb* of the field; in the *sweat* of thy face shalt thou eat bread." Agriculture, then, must have been the first avocation of man after his fall. "Thorns and Thistles" were to spring up spontaneously, while the herb that men was to eat should be planted and nourished by the hands of man to this natural life. Adam began to cultivate the soil directly after the creation. It was his business to dress and keep the garden, ere sin had blasted its original beauty. After the fall the earth refused to yield of her own accord the necessary of life, labor became indispensable, and at the same time severe. Since then it has been more or less, in every age and in every nation, an occupation to till the soil and draw from its bosom the sustenance of life and comfort. Many nations it is true, have made it a matter of comparatively small attention, choosing from the situation of their countries or the disposition of their people, to secure to themselves the blessings of life by occupying their time in some other pursuit.

But the Israelites, after their settlement in the land of Canaan were almost entirely a nation of farmers, either in tilling the soil, or watching their herds—the greater portion in cultivating the ground.

By the direction of the Almighty, each tribe had its own province, and

every family in each tribe had its own plantation. The law of Heaven was such, that no family could entirely lose its plantation, for it could never be sold for any longer term than to the year of Jubilee. Some tilled the earth by the production of wheat; some in the cultivation of the vine; the latter formed an important part of Jewish husbandry. Much labor was employed in preparing the ground. The vines had to be pruned several times in the course of the year. The gathering of the grapes and bearing them to the "wine press" required hard labor. The care of fruit trees was another occupation of the Jewish farmer—yielding him a rich reward if rightly cultivated.

Another subject of care with the Jewish farmer was the *Bee*. They abounded in their country from the earliest times, so that it was called the land "flowing with milk and honey." Although they were found in a wild state, yet it required care and labor to preserve them so that they would prove a source of profit.

Farming or Agriculture, then, was the main business of the whole Jewish nation. "They were nothing but farmers."

The merchant and tradesman, who make so respectable an appearance in our country, were for a long time of almost no account in that country. Among the early Jews, many of the articles that are with us made by different tradesmen, were made in the family, and made to use, not to "sell."

The women spun and wove, so that all articles of clothing were made for the whole family. Instead of a hat, they wore upon the head a "mitre" of

cloth, and on the feet a pair of "sandals," so that the whole suit could be very easily provided without the least assistance from abroad. No one wanted a "tailor" a "shoemaker" a "hatter" or a "weaver."

A good wife with us will dispense with a "baker," but in those days she could not look farther than the kitchen for a miller.

Hence we see, that God's chosen were as a people farmers, men that worked and tilled the soil for a livelihood. They were not ashamed to soil their hands or have their faces tanned by the sun and wind. Females were brought up to hard labor—they felt it no disgrace, to join in wedlock with a man, if "he was nothing but a farmer." Nations that have long since become extinct, as far as nationality was concerned, in their most prosperous days, honored the calling of agriculture, until within the last 1200 years, when that profession began to decline, and what are now called the "learned" profession began to flourish, and farming began to be thought the most degrading business that a man could follow, although the "learned" profession obtained their daily bread from the labor of him, whom they despised.

L. S. SPENCER.

LYNN, Warren Co., Iowa.

DEEP PLOUGHING, &C.

The article in the April No. of the Farmers' Magazine, on deep tillage, taken from Goward's Real Estate Register, I find true in part. That land can be plowed too deep, and often is, I have no doubt; while I believe that a large portion of land is not ploughed deep enough. From six to seven and a

half inches is generally enough in this vicinity. I have lately ploughed a corn stubble, situated on a diluvial formation that is quite strong and gravelly. I ploughed generally about seven inches. To plough such land twelve or fifteen inches, would require a double, or treble team, and a plough constructed on purpose; for no common plough would stand an hour, there being many stones through the soil—not very large, but perhaps weighing from one to ten lbs., and occasionally double that amount. Any one acquainted with ploughing on stony ground knows, that frequently a small stone will stop a plough.

I have lately ploughed a field on the low creek flats, and whenever or wherever there is a slight rise or elevation in such land, the gravel and sand is within a few inches of the top of the ground. Turning up a large amount of gravel from the sub-soil has a tendency to make the land barren. Long practice has confirmed me in the belief, that the more the gravel and sand is brought up from below, the more the land is injured, the more unproductive it becomes.

I am now ploughing on a side hill with a gentle descent, and I plough about seven inches deep. Hill land in this vicinity is underlaid with a bluish drab sub-soil, sometimes called hardpan, that is from six to thirty inches from the top of the ground, and the closer it lies to the top the harder the ploughing. The field that I am now ploughing would require three heavy teams to plough twelve inches deep, and a plough made on purpose, and further I have never used a plough that would turn a sod when running twelve or fifteen inches deep.

My experience is that the ground is crowded one side and not turned over.

A number of years ago, my father let one farm to be worked on shares, and the man that took it ploughed a field for buckwheat on the top of a hill, and he ploughed it nine or ten inches deep, and worked the team almost to death ploughing so deep. The buckwheat was sown in due time, and the yield was not more than five or six bushels per acre, while in the adjoining we had frequently raised from thirty to thirty-five bushels. That field did not get over that deep ploughing in five or six years, in consequence of ploughing up so much of the sub-soil.

The Hon. S. P. Gregg, ex-president of the Tioga Co. agricultural society, told me a short time ago, that he had nearly spoilt a number of his fields by ploughing so deep. He had heard say, one must plough deep, and had done it till he had got his fields into such a condition that he could hardly raise anything. His farm is on the Berkshire hills. R. HOWELL.

NICHOLS, May 9th, 1859.

REMARKS.—That buckwheat field was doubtless ploughed too deep; and yet had it been a home lot near the barn, and the receptacle of abundant manures, that same deep ploughing, and even deeper might have been the true policy. If that land had been ploughed the previous November, lined early in the Spring, and manured at sowing time, say the middle of June, it might have given forty bushels to the acre, and not have been injured for after crops. The injury may have come from bad manage-

ment otherwise, and not solely from deep ploughing. Very few journals advise too deep ploughing, unless you mean to treat the land well in other respects.

IMPROVEMENTS IN AGRICULTURE.

The improvements that have begun, and under the various influences that are operating to extend them, will go on in an increasing ratio, until the arable portion of our land will afford a return of double the present acreable products. And were our politicians guided alone by the most honorable and patriotic motives, instead of seeking to elevate their own parties into power, and to advance their own private interests, much might be expected through enlightened legislation to advance this greatest of all industrial interests.—*Valley Farmer.*

EFFECTS OF DRAINAGE.

All the rain that falls must be carried away by natural or artificial drainage, or, having thoroughly saturated the soil on which it falls, be left upon the surface to be carried away by evaporation. Now every gallon of water thus carried off by evaporation requires as much heat as would raise five and a half gallons from the freezing to the boiling point. Without going to extreme cases, the great effects of heat thus lost upon vegetation cannot fail to be striking, and it has frequently been found that the soil of a field well drained is ten to fifteen degrees higher in temperature than that of fields not drained, though in every other respect the circumstances con-

nected with the soils were similar.—The effects of this on growing crops is very marked, drained soil having altogether the advantage.—*Goward's Register.*

HUNGARIAN GRASS.

Very different opinions, we see, are entertained of this plant. The following is by the editor of the *Louisville Journal*:—

We would advise the sowing of a half bushel of seed to the acre of good land, after thorough preparation—say at least two good plowings and harrowing before sowing, so that the soil would be fine for the reception of the seed—then about the 20th of June, or from that time to the first week in July, sow the seed and harrow both ways, or roll the land after sowing, and then harrow so that the seed may be covered deep enough to vegetate; and in about sixty-five days it will be ready for the scythe; the after management is precisely the same as that for timothy hay as directed by Mr. Moore. We scarcely know whether it would be proper to recommend the cultivation of it largely, as our acquaintance with it is too limited, but we have a neighbor who has fed it extensively to his milch cows, and he speaks of it in the very highest terms—thinks it much superior to timothy or clover hay or chopped oats.

MORE ABOUT HUNGARIAN GRASS.

A gentleman recently from Iowa, informs us that this new forage crop more than holds its own in that State and that a larger breadth than ever before will be put in the present season. We observe that Mr. A. B. Dickenson, of Central New York, writes the *Country Gentleman* that the Hungarian grass of last season and the Honey-blade grass of this season, "is nothing more than what millet was forty years ago." Mr.

Dickenson is good authority, and this statement is strictly true. Yet, if Mr. Dickenson undertakes to say that the Hungarian grass, or Honey-blade grass or whatever else speculators and speculators may choose to call it for selfish purposes, is the variety of "millet" that he and other good farmers were familiar with "forty years ago," we undertake to say that he doesn't know what he is talking about.—*Louisville Courier.*

A JAUNT

For a change we have been enjoying a brief trip in the country, by the way of the Camden and Abmoy railroad to Jamesburg, thence by a branch of that road to Freehold, and thence by two horse stages, in the good old but not very comfortable way, through Monmouth and Ocean counties, by way of Tom's river, Cedar Creek, Barnegat and Manahocking, to Tuckerton, in the eastern part of Burlington county, N. J., near the Atlantic coast.

Through Monmouth county the agriculture is of a high order, and has been wonderfully improved the last few years, by the use of green sand marl. From the good old town of Freehold we started with our own conveyance, a pair of feet, in advance of the stage, in order to gain a little time to chat with the farmers by the way. The wheat, rye, corn and clover fields were such as would naturally put one in love with farming, if not already in love with it. We saw that the farmers there had adopted the practice of dividing the farm into pretty good sized lots, as of ten, fifteen, twenty, and twenty-five acres, a much better course, as it seems to us, than that of cutting them by innumerable fences into mere patches.

A field of clover attracted our special notice. It must have contained twenty acres or more. The soil was a sandy loam, and had been marled. So large a field, of so uniformly even and luxuriant growth is not often seen. The owner, who happened along with his team, told us that in a few days he should turn it under. He did not believe in taking a crop from land every year. The land, in his opinion, should have occasionally a year's rest. The clover would give him a good crop of wheat next year. We replied, If you feed your land well, it will feed you and enable you to feed a good number of us poor chaps in New York.

As we went on with eyes open on both sides of the way, we could not but doubt the correctness of his procedure, for that locality, where other fertilizers than clover can be readily obtained; and where all produce is valuable from its proximity to market. That clover seed is a first rate manure we have no doubt. There is not a better mode of bringing up land, in places distant from market, and where manure cannot be transported at a small expense than this same man was pursuing. The question for each farmer is, what is the best practice for his land and his locality; and when we see a farm brought up to the high condition of the one then before us, we are apt to think the owner knows what he is about and not to trouble him with unasked advice.

We soon came to another clover field, not as large, nor of as heavy, nor of as even growth, but yet remarkably good; and the owner was just turning in a drove of swine,

twenty or thirty shoats. We made a talk with him; and if perchance he got any ideas from us, we got as many of him. He had practised feeding off clover by swine, as preparatory to both the wheat and the corn crop, and had been satisfied with the results. By growing shoats in clover, fattening them in early autumn, on truck for a while, then pouring in corn meal for a few weeks, and killing them before any cold weather, he had been able to produce pork and lard at a profit and to grow excellent crops the succeeding year. His idea is that the swine by treading into the soil their own droppings and at the same time trampling down such of the clover as they do not consume, thus consolidating a light soil, leave the land in just about as good condition for a succeeding crop as if the clover was turned under, and that hence the growth of the animals is so much clear gain. We will add that if we were conducting a farm suitable for the purpose, we would certainly give that practice a fair trial. The expense of making pork is more in growing the animals than in fattening them. Any device for cheapening the growth is therefore worth considering.

Before being overtaken by the stage and picked up, we had a gossip with another farmer whose forte seems to have been in growing great crops of potatoes. He has tried every mode of planting, far apart and near, in rows and in drills, and has come to the conclusion, that three feet each way, rows running both ways, plowing or cultivating in both directions, so as to leave little work for the hoe, is best. For field culture

we have no doubt it is. Drilling might answer for the small plot where the labor is little thought of, and the only object is to get the maximum crop, without regard to expense of labor.

From a few miles below Freeport to Tuckerton, mostly through Ocean county, is a rather uninteresting country, flat, sandy and little cultivated. To ride fifty or sixty miles through such a country, the wheels wallowing in deep sand, horses tired, sun scorching, dust choking, is a caution, not to go that way again till the Cape May Railroad is done. Most of the people in that region "follow the sea," a large part of the year. The men are about all captains, if one may judge from their addresses to each other. The title we suppose was won from their having commanded a wood boat or a fishing smack; and as they seemed to us to be a hard-working, sober-minded, temperate set of men, we would be the last to envy them the honor of a captainship. Oysters from the Chesapeake and pine wood from "Old Virginia's shores," and the men that bring them are not to be despised.

Tuckerton is a beautiful and thriving village. It was called by another name till a few years ago, when Judge Tucker, one of the oldest citizens, invited the people to a feast, and after having made them very grateful and possibly somewhat mellow, he persuaded them to change the name of their charming village and call it after him, thus fulfilling the Scripture, "They call their lands by their own name." We believe he then owned a large part of Tuckerton.

It is wonderful what crops the peo-

ple in and about this place obtain from soil so sandy that one would say from first sight could be worth but little. But so it is. From fifty to sixty bushels of corn to the acre, we learned is the usual crop. We have seldom seen finer samples of cultivation than by a Mr. Adams, at New Gretna, a few miles west of this place. But our object was not so much to see good farming, as to look at lands, in the interior of Burlington county, not yet reduced to farms, about halfway between New York and Philadelphia and within two hours of each, when railroads already commenced shall be finished. Thousands of acres, tens of thousands, hundreds of thousands, we might say are so situated. It is sandy land, either level or gently rolling, intersected by numerous streams, which afford some of the finest water powers in the world, the land of almost precisely the description of large tracts in the surrounding regions, which are found on cultivation to produce good crops of all kinds of farm produce and to be specially favorable to the production of fruits and garden vegetables. We learned that some of the best fruit growers in the state are putting out orchards in this region, believing that the insects so troublesome in other parts will be some years in finding their way to this, and that this whole region will possess peculiar advantages for the trucking business with New York and Philadelphia.

For ourselves we reasoned thus;—this land can be prepared for the plow for just about ten dollars an acre; the fencing and buildings, inasmuch as the large timber has been

cut off, will cost a little more than in well wooded regions; more manure will be required than in heavy retentive soils; but the climate is fine and perfectly healthy—the best of water abounds; and now will not the extra expense for manures be more than counterbalanced by the superior market privileges, here to be enjoyed, as soon as the rail road, now building shall be completed. Marl is an important item in the fertilization of such land as this, and as soon as the road now building is completed, can be bought to the greatest advantage. A lack of communication with any large city has hitherto operated to prevent the settlement of these lands. That objection is soon to be removed; and we believe that persons desirous of purchasing new lands, and yet of not leaving the homes of their fathers too far behind, would do well to look into central and southern New Jersey.

After spending a day or two in the region of Martha's Furnace, a central point in these yet unimproved lands, we turned our faces homeward; and we will only add that when the New York & Delaware road, by the way of Cape May is completed, it will be a much shorter job to get from this metropolis, to the central regions of southern New Jersey.

GARDEN WORK FOR JUNE.

Work *when it rains* must be the motto for this month.

Pull weeds from among your Onions, Lettice, Melons, &c. &c. when the ground is wet; then they will pull up instead of breaking off, and it will not injure the plants by disturbing their seats.

Hoe between the rows in dry weather as that will destroy the weeds and help the growth of your vines by keeping the surface porous, allowing it to absorb all the moisture possible from the atmosphere.

For the same reason stir the ground as often as possible around your Cauliflower plants as they require a great amount of moisture to make them head. If the weather is very dry they should be watered.

Liquid manure may be used on vegetables with impunity when they are young if applied on a rainy day.

Put a wheelbarrow load of good old horse or cow manure into a hogshead and stir it well, give your plants a good dose of this every time it rains.

If a pound or two of whale oil soap is dissolved in it, it may help keep off the bugs from your vines, besides it will aid very materially their growth. There are many nostrums recommended to destroy the bugs on vines, all of them fail sometimes. We have tried the common garden Tansy, (*Tanacetum vulgare*) and it drove the bug entirely away; when at other times it would entirely fail.

Try something; don't fear; there is no use; steep some chamomile, wormwood, helianthus leaves, or some other offensive plant and give them a dose, it will cost but a little trouble and you may hit upon a remedy that will be valuable to you and your neighbors. Experiment, try to find out something for yourself.

Don't neglect your strawberry beds until the fruit is ripe before you think of putting on a mulch to keep the fruit clean.

If you have tan use it, if not, sawdust, if you have neither use some

fresh cut grass which is the neatest and sweetest of all. And we are not sure but it is quite as good as tan, although it is not quite as highly recommended by strawberry growers.

If you wish to grow some large strawberries, pick off all but one or two on each stem soon after the fruit is set, cut off all the runners as soon as they appear, then give the plants plenty of water with a little liquid manure, and you will be very likely to beat your neighbor's unless they have a larger variety and have tried the same trick. Vines of nearly all kinds may be planted this month with a fair chance of bringing their fruit to maturity. Cucumbers for pickling are better planted now than earlier.

Onions may be watered with a weak brine, say two quarts of salt to a barrel of water; it will assist their growth, and oftentimes destroy small insects that infest them, and produce what is generally thought to be a disease of the plant.

Look well to all noxious weeds around your garden, let none scatter their seeds where you will have to fight an army next year instead of a single enemy. In no place is the old adage, a stitch in time saves nine, so true as with garden work.

THE GARDEN.

Is a bound volume of agricultural life, written in poetry. It is the farmer and his family who set the great industries of plow, spade and hoe in rhyme. Every flower or fruit-bearing tree is a green syllable after the graceful type and curse of Eden. Every bed of beets, celery, or savory roots or bulbs, is a page of blank verse, full of *belles lettres* of agriculture. The farmer may be seen in his

garden. It contains the synopsis of the character in letters that may be read across the road. The barometer hung by his door will indicate certain facts about the weather, but the garden, lying on the sunny side of the house, works with great precision the degree of mind and heart culture which he has reached. It will embody and reflect his taste, the bent and bias of his perceptions of grace and beauty. In it he holds up the mirror of his inner life to all who pass; and, with an observant eye, they may see all the features of his intellectual being in it. In that choice rood of earth he records his progress in mental cultivation and professional experience. In it he marks by some intelligent sign, his scientific and successful economies in the corn field. In it you may see the germs of his reading, and can almost tell the number and nature of his books. In it he will reproduce the seed-thought he has called from the printed pages of his library. In it he will post an answer to the question whether he has any taste for reading at all. Many a nominal farmer's house has been passed by the book agent without a call, because he saw a blunt, gruff negative to the question in the garden or yard.—*Élihu Burritt.*

TO DRIVE STRIPED BUGS FROM VINES.

We notice that the striped bug is making sad havoc with vines, &c., at this time, and as every remedy is sought after we give the following, furnished by a correspondent of the *Prairie Farmer*:

S. C. Sheller, of Christian county, writes: "As there have been a good many remedies given of late in agricultural journals, to keep off the striped bug from vines, I will give you an infallible remedy, and that too, without requiring a three cent stamp from every reader. It is: Take any suitable vessel and put in some

of the contents of the privy, and pour on water sufficient that with an old corn broom you can sprinkle the vines—say every two days and after every shower of rain. You would be surprised to see how quick the bugs *vamosse the ranch*.”—*Southern Homestead*.

LESSONS FOR THOSE WHO LIKE THEM.

Be not always speaking of yourself. Be not forward. Boast not. Angle not for praise. Do not equivocate. Confess your faults. Tell no lies—not even those called innocent. Listen when spoken to. Be polite at table. Attend to the ladies. Dread the character of an ill-bred man. Be remarkable for cleanliness of person. Attend to your dress. Study elegance of expression. Avoid old sayings and vulgarisms. Use polished language. Be choice in your compliments. Acquire a knowledge of the world. Praise delicacy. Study the foibles of mankind. Command your temper and countenance. Never acknowledge an enemy, or see an affront if you can help it. Avoid wrangling, meddling, and tittle-tattle. Judge not of mankind rashly. Trust not implicitly to any. Beware of proffered friendship. Doubt him always who swears to the truth of a thing. Be choice in your company. Adopt no man's vices. Avoid noisy laughter. Refuse invitations politely. Dare to be singular in a right cause, and be not ashamed to refuse. Strive to write well and grammatically. Affect not the rake. Be choice in your amusements. Never appear to be in a hurry. Neglect not an old acquaintance. Avoid all kinds of vanity. Make no one in company feel his inferiority. Be not witty at another's expense. Be sparing of raillery. Never whisper in company. Look not over one when writing or reading. Hum no tunes in company, nor be in any way noisy. Eat not too fast nor too slow. Spit not on the floor or carpet. Hold no indelicate discourse. Avoid odd hab-

its. Lose no time in transacting business. Indulge not in laziness. Be not frivolous. Study dignified as well as pleasing manners. Be not envious. Show no hastiness of temper. Talk not long at a time. Tell no stories. Avoid hackneyed expressions. Make no digressions. Hold no one by the button when talking. Forestall not a slow speaker. Say not all you think. Adapt your conversation to the company. Give not your advice unasked. Renew no disagreeable matters. Praise not another at the expense of the present company. Avoid rude expressions. Avoid mystery and long apologies. Look people in the face when speaking. Swear not. Talk not scandal. Talk not of private concerns. Few jokes will bear repeating. Take the peace-maker's part in debating. Be not clamorous in dispute, but exercise good humor. Learn the character of the company before you say much. Suppose not yourself laughed at. Interrupt no man's story. Ask no abrupt questions. Reflect on no order of people. Display not your learning on all occasions. Avoid debts.

WANTED, CAPACITY IN THE SOUTH.

The Commercial Bulletin, in the following, presents remarks of immense importance to the South, and to any country that inclines to exalt one calling, however transcendantly important it may be, at the expense or to the neglect of other branches of industry. England may be willing that the south should spurn mechanical industry. France may have no objection. New England, if wholly selfish—we hope she is not—might rejoice at southern contempt for the works of the shop. But if the south would be true to herself, she must think, not less of her fields, but more of that mechanical industry without which, no country, no sec-

tion, however broad and deep its fields can long prosper.

One effect of the want of proper attention to domestic industry in the South, is the want of capacity, which might be turned to profitable account. This is a very heavy drawback to her prosperity. The results are everywhere seen and felt, but the cause, we fear, is almost lost sight of. The evil pervades, to a great extent, the entire South. It is due to the prevalence of a false notion in reference to the dignity of labor, and a wrong direction which affairs in consequence took years ago, and in which they still continue, though, happily, there are indications of a return to more enlightened and philosophic views, and to a policy more in accordance with those principles of sound political economy from which a community departs from its peril. There is a great variety of mental capacities and tastes observable in every state of society. The design of this evidently was to provide for the different wants of man as a social being. This diversity of tastes and of talents is, therefore, a great primeval law, which God has imbedded deep in the nature of man for a great and wise purpose, and to ignore it is to ignore an irreversible decree of Omnipotence. We know very well that commerce comes in to remedy largely a departure from the observance of this great law, which, hence, becomes a wise provision, to avoid the evils that otherwise arise from such departure where this in some degree cannot be avoided, as is sometimes the case. But that it is a law, general in its extent, is manifest from the fact that in such communities as are apparently, or even really, shut up to a single pursuit by nature herself, this variety of inclination and capacity is still found, though it may be less distinct than in countries more favorably circumstanced. Hence in regions better adapted to agriculture than manufactures or the mechanic arts, there will still be found persons who have no taste for pastoral life.

They prefer the music of machinery to the warblings of forest choristers. They worship more devoutly the triumphs of human genius in the skill displayed in producing artificial results, than the "cloud-capped palaces and gorgeous towers" erected by the hand of the Great Architect. In a word, they prefer the hammer, the chisel, the loom, the pencil or the scalpel to the plow, the spade and the pruning-hook. If they are shut up to what they have no inclination for, they are listless and indolent, and in consequence of this they are ready, or they soon become so, for almost anything that will relieve them from the *ennui* which is so oppressive to them.

Now in the south we have no excuse whatever for ignoring this great law of an inherent variety of talent and taste in the moral and intellectual constitution of man. We have almost every variety of soil and climate. We have, or may have, almost all kinds of natural productions, water power mines, and in a word the elements of nearly every kind of industry. What do they avail us? Is not our industry confined chiefly to the culture of two or three agricultural productions? For what was all this profusion of elemental riches given us, if not to be developed by industry, by the skilful labor of cunning hands wisely and systematically employed? Variety of elements indicates clearly enough to him that can read the design, the necessity of variety of pursuit in order that there may be no waste of capacity. And this, we take it, is precisely the point where the shoe pinches in the South. It is just here that we need reform, that we need a healthful departure from the old track which we have been pursuing with never a thought, apparently, that it is not the right one for us to travel.

* * * * *

We are drawing no fancy sketch, but one that is truth to the life. Whoever is familiar with the South must, we think, recognize the original of our picture. We wish it distinctly understood, that we are casting no

reflections upon the callings of medical or law students. In the case we have supposed, it is the misfortune of the young man rather than his fault that he is no use to himself or anybody else. His ambition to be somebody and to do something was commendable, and it took a wrong direction only because there was no opportunity for giving it a right direction. It by no means follows that because a man has not the capacity to fit him for a physician or an advocate, that he is therefore without talents. FULTON or MORSE as a doctor or lawyer, or preacher, would have been, we doubt not, a dead failure.

We observed in the beginning of this article that the evil we are commenting upon is due, in a great part if not chiefly, to a false notion in reference to the dignity of labor. The young man thinks that to be a mechanic, though not in any sense disreputable, is, after all, not quite so "respectable" as to enter a "learned profession," and this false and ridiculous notion causes many inferior minds to adopt these professions, as the weaker minds are the first to yield to false notions of pride, or to the prevailing prejudice. Contempt of them frequently denotes genuine talents, boldness and originality. Hence we find mechanics in the South very often exhibiting the first order of ability.

The foolish notion in regard to the social status which industrial artistic pursuits give their votaries in the South, ought to be everywhere scouted, as depressing in its effects, and incalculably disastrous to her best interests. The North has encouraged a different spirit. She varies her industry so as to give free scope and employment to every class of talent, and nothing is therefore wasted. She supplies us with what we might supply ourselves; which we receive, pay largely for, and ridicule her as a community of "clock peddlers" and rick-nack makers, while she is all the while laughing at our stupidity, and exhausting, beggarly policy of pay-

ing and abusing her at the same time.

It is about time for us to change all this. If we would become independent, in any sense worthy of anybody but an idiot's regard, we must vary our industry, so as to develop our natural riches, and so as to prevent any waste of capacity among us. This will give us true independence, and before it Northern "aggressions," however grave or numerous so ever they may be, will vanish as the hosts of Sennacherib did before the destroying angel. Depend upon it, this is the only war club competent to beat back the serid "aggressions." Make a large community rich in intelligence and in moral and material wealth, and it will be strong—abundantly able to take care of itself, and to repel any assaults from what quarter soever they may come.

THE ROBIN.

At a meeting of the Massachusetts Horticultural Society, early in 1858, a resolution was introduced, authorizing the president of that society to petition the legislature for a repeal of the laws prohibiting the killing and destroying of the robin. This motion was laid on the table, but a committee was appointed to investigate and learn the habits of the robin, and report. This committee reported March 5th, 1859.

We give in brief the result of the committee's investigations as reported by its chairman, Prof. J. W. P. Jenks, and found in the society's journal:

1. Early in March numbers of this bird make their appearance in this vicinity; but until the second week in April, only the male birds.

2. The gizzards of those killed in the morning were, as a general rule either entirely empty, or but partially distended with food, well macerated, while those killed in the latter part of the day were as uniformly filled with food freshly taken.

3. From the almost daily examina-

tion of their gizzards, from the early part of March to the first of May, not a particle of vegetable matter was found in the gizzard of a single bird. On the contrary, insects in great variety, both as to number and kind, as well as in every variety of condition as to growth and development were the sole food.

But nine-tenths of the aggregate mass of food thus collected during this period consisted of one kind of larva, which, through the aid of Baron Ostensacken, Secretary of the Russian Legation at Washington, I was enabled to identify as the *Bibio albipennis* of Say, and whose history and habits, by the aid of Dr. Asa Fitch, entomologist of the N. Y. State Agricultural Society, I was enabled to make out quite satisfactory.

From one to two hundred of this larva were frequently taken from a single gizzard, all in a fresh, unmacerated condition; and usually, when this larva was found, it was the only food in the stomach.

4. During the month of May, the *Bibio* larva entirely disappeared from the gizzards, but up to the 21st of June, was replaced by a variety of insects or worms only, including spiders, caterpillars, and beetles of the family *Etateridae*, the parents of the well known wire worms, so destructive to corn and various other seeds, when committed to the ground.

The earth worm I found to be a favorite food for the young bird, but sparingly employed by the adult for its own use.

5. From the date of June 21st, I began to find strawberries, cherries, and pulpy fruit generally, but in a majority of the examinations intermingled with insects, which led me to conclude that they were not fond of an exclusively vegetable diet, but rather adopted it as a desert, and from the ease of procuring it, particularly during the enervating season of moulting. At this season of the year, I discovered a marked difference in the food of the birds killed

in or near the village and those killed in the country at a distance from gardens and fruit trees, the latter having less of stone fruit and more of insects in their gizzards, which led me to conclude that the robin is not an extensive forager.

6. The mixed diet of the robin seems to continue from the ripening of the strawberries and cherries to October, the vegetable portion consisting during August and September, in great part, of elderberries (*Sambucus canadensis*) and pokeberries (*Phytolacca decandara*).

7. During the month of October, the vegetable diet is wholly discarded and its place supplied by grasshoppers and orthopterous insects generally.

8. Early in November the robin migrates southward—the few remaining eking out a miserable existence during the winter months on bay berries (*Myrica cerifera*), privet berries (*Ligustrum vulgare*), and juniper berries (*Juniperus communis*).

AGRICULTURAL JOURNALS.

We have nowhere seen the objects and influences of these works better set forth, in a few words, than in the following, from the pen of L. G. Chace, of St. Louis.

Not a people on the face of the globe understands the science of government as clearly as do the Americans. This comes of good stock, (a very important item with nations as with stock raisers,) much reading, and thought in that direction, and is commendable. I would by no means have the wisdom of the nation less, in that direction, and while agriculturists should be well informed in political economy, they should also acquaint themselves equally with their own particular profession. There are but few tillers of the soil who do not subscribe for one or two political papers, and many take from two to five, including some other papers of even questionable

nonsense. Now, I would respectfully suggest that the farming community should, and could, afford to subscribe for an equal number treating upon their own calling. It would very much tend to make the country worth governing well. Political journals have not led the people of this country, nor fashioned their views of political economy, but have only caused them to think and reflect upon the subject for themselves. So with journals of agriculture; their worth lies not more in the truths they teach, not more in what agriculturists draw from them, than what the journals draw from agriculturists, stirring up thoughts and ideas that would have lain forever latent, and causing people to think, and then to act. I am happy to see that a few of the leading political, scientific and literary journals of the country devote a part of their columns to the interests of agriculture. It shows that their conductors understand and appreciate the importance of this great main trunk of the industrial pursuits. More journals should be published devoted to agriculture, particularly in the Southern States, though if the present ones all over the country were ten times as much patronized their proprietors would make them worth ten times as much as they now are. The cultivators of the soil plead that they are unable to patronize them, but the truth is they cannot afford not to. I feel a deep interest in agriculture, and am satisfied that if farmers are desirous that their sons should love their homes and feel an interest in improving them, they must make them lovely. There is more or less taste inherent in every one, and nothing but a long drilling in slovenliness and disorder gets it out of the soul. It is those who cannot afford to read, who cannot appreciate a tasty home. No matter how humble it is, it can be cosy, a little paradise from which sons or daughters will not be in a haste to leave. Though I have not the least desire to control a single soul but my own soul, I do hope and trust

that the young men who are just about to commence life in the field of agriculture, will bear in mind that a crop of manliness will always be in demand; let them make it a staple crop, as it commands a premium through life. Let the young men of the farm, of the plantation, have high aims; store their minds with practical knowledge, qualify themselves to fill any position in life, and as this country now leads the world in political, so will she in domestic economy.

SEWING MACHINES.

It would be amusing, if it were nothing more, to witness the competition in this article. But it is more—it is interesting. Yankee ingenuity, first in getting up a useful machine, and then in finding a buyer is here pushing in a good cause. And nowhere are these helps to domestic labors more needed than in the farmer's family.

The peasantry of Europe, when not fighting the battles of their lords, are contented to remain pretty much at home. Few changes of clothes suffice. These are coarse, strong and lasting. The man, the woman, or the child, once clothed, is clothed for a long time to come—perhaps till another emperor, king, queen, arch-duke, or arch-dutches comes to the throne. Schools are few, and hardly accessible to the children that are to cultivate the soil. Clean suits for the school room are not required. Carpets are out of the question; and stone floors are made without the aid of the needle.

All these things are different in the families of American farmers. The farmer must have more than one suit of clothes; and more than one suit for the work, and another for Sunday.

His wife and daughters will strive hard to do his sewing and that of the family. The children will be taken to church on the sabbath, and be sent to school during the week. They must be clothed accordingly. A portion of the house at least will be carpeted. All this implies a great deal of sewing. Both the sewing and the general house-work are more than doubled as compared with the same in the families of European farm laborers.

A consequence is, that farmer's wives are—we will not say—*over-worked*, for that would be doing their husbands injustice, but are too much confined to the house, have too constant a care, get too little opportunity to change the daily routine of life for something that offers a change and exhilaration. Life with too many of them becomes dull, sombre, cheerless. The spirits sink under it and the health fails. It is a notorious fact, that as a general thing, our farmer's wives are not as young, as buoyant, as joyous and hopeful at forty and fifty as they should be. The cause we have indicated. What is the remedy?

Shall we return to the simplicity of a half enlightened European peasantry?—live on stone floors without carpets?—have a coarse suit for the week and a clean one for Sunday and be contented?—make a stout pair of corduroys for the oldest boy, that will go to the next brother by the time his feet stick through six or eight inches, and then on down to all the brothers he may chance to have, without further sewing?—reduce our wants in general to the lowest ebb? This might be better than that our

women should become invalids. But there is a better way.

The farm-house should be constructed with special reference to facilitating the female labor, machinery should be introduced for the same object. It is twice as laborious for the matron of the family to keep an ill-constructed and shabbily arranged house badly, as to keep a convenient house well. There are a thousand contrivances, some that are patented and more that are not, adapted to facilitate the in-door work. Why are not these more common in our farm-houses? By their aid the mother might "do up" the ordinary house-work betimes, sew a while on a new garment, mend papa's coat, Billy's pants and Mary's frock, read awhile to keep herself passably informed, and be off at least by the cool of the afternoon to enjoy some health-giving exercise in the open air.

Among all the appliances for expediting the indoor work of the farm-house, none is so important as the sewing machine. Labor is good—is productive of health and happiness. We have no patience with those who despise useful labor. But every person needs recreation. None find so little time for it as farmers' wives, having the extra labor of the farm-house superadded to the thousand cares of training, providing for and educating a family. The sewing machine here comes in play. In plain work, and such is most of the family sewing, it will do the work of an hour in five minutes.

For the mother of a family this is so much gained from the almost everlasting treadmill round of family duties, for *mental improvement*, that

she may be the more capable of imparting instruction to the children, for recreation, that her own spirits may be refreshed and her health invigorated, for *exercise in the open air*, that her countenance may be again tinged with the freshness of youth, and for society, which all need and ought to have.

Get a sewing machine, if you want your wife to be a happy and healthy woman, with time to bestow as much care and instruction upon the children as will do them good. If you ask whose? we cannot tell. We bought Wheeler & Wilson's nearly two years ago, and we never have repented it. Grover & Baker's we believe is good. Singer's is; and those of other firms we suppose are. The one we have cost \$105 two years ago; and would certainly be cheap at that, if none were to be had cheaper, so very useful is it in the taking of stitches. But we believe that Wheeler & Wilson now make just about as good machines for fifty dollars. Grover & Baker have a pattern which they sell for the same, and we believe that either of these is good enough for any one. We know that the Wheeler & Wilson machine is good, because we have tried it and "there is no mistake." It goes with the speed of a 2.30 nag, makes little noise, sews well, no ripping, and does not seem to wear, but yet appears as if, with proper care, it would last a lifetime, and then be fit to bequeath to another generation.

Cheaper machines we are aware can be had. Whether they would answer a good purpose is another thing. We doubt whether in the long run any thing would give bet-

ter satisfaction than one of Wheeler & Wilson's best.

IS IT SO?

"The shortest way to be rich is not by enlarging our estates, but by contracting our desires."

This sentiment we presume will be approved by a great many, and yet here, as almost every where else, extremes are to be avoided. While restless ambition makes us unhappy in ourselves and enemies to each other, an over retrenchment of our wants tends to imbecility, laziness, barbarism. It would not be desirable that we should be contented with rags to half clothe us, a potato for breakfast, a potato for dinner, a potato for supper, and a bunch of straw to sleep on, as were too many in Ireland, when famine came upon them. A people, in order to be energetic, progressive, and capable of developing a country's resources, must have either an active benevolence beyond what we are prepared yet to expect of our race, or a great many wants; and labor to supply even artificial wants is better than indolence and inefficiency.

DESTRUCTION TO HOUSE BUGS.—The French Academy of Science is assured, by Baron Thenard, that boiling soap and water, consisting of two parts of common soap, and one hundred parts of water by weight, infallibly destroy bugs and their eggs. It is enough to wash walls, wood-work, &c., with the boiling solution, to be entirely relieved from this horrid pest.

THESE are few who know how to be idle and innocent. By doing nothing we learn to do ill.

EVENING.

"If you spend the day profitably, you will have cause to rejoice in the evening."

Days passed without doing some good leave no pleasure for an evening's review.

Count that day lost, whose low descending
sun
Views from thy hand no worthy action
done.

MESSRS. T. & B. HARRINGTON, of Westchester have a thorough bred, Durham heifer calf, which, at precisely one year old, weighed 660 lbs.

Since writing the above we learn from the Hampshire Gazette that C. W. Stubbins of Deerfield Mass., has a calf of one year old that weighs 840 lbs. Its mother, according to the Gazette, is 7 years old and weighs 145 lbs. We suppose the printer's boy left out a cypher at the end thinking perhaps it made no great difference, and that it should have been 1450 lbs.

How fine an animal is that of Mr. Stubbins, we are not informed; that of the Messrs. Harrington is a perfect pink of an animal. We would not advise them to sell her for any thing less than \$500.

THE happiest climate does not produce all things; and it was so ordered that one part of the earth should want the product of another, for uniting mankind in a general correspondence and good understanding.

THE NEW YORK POST, in its notice of Humboldt's death, reminds us that the great deceased was born the same year as the Duke of Wellington, Napoleon Bonaparte, Stuart, Lord Castlereagh, George Cuvier, Chateaubriand, Sir Thos. Lawrence, John Quincy Adams, Brunel, the civil en-

gineer; Tallien, the revolutionist, and Mehemet Ali, of Egypt.

TAKING them one with another, said the Rev Sidney Smith, I believe my congregation to be the most exemplary observers of the religious ordinances; for the poor keep all the fasts, and the rich all the feasts.

A GREAT, a good, and a right mind is a kind of divinity lodged in flesh, and may be the blessing of a slave as well as of a prince; it came from heaven, and to heaven it must return; and it is a kind of heavenly felicity, which a pure and virtuous mind enjoys in some degree, even upon earth.—*Seneca*.

GRAND PA'S LETTER TO BOYS.

LETTER SEVENTH—DRINKING.

Now boys, I hope you are not tired of reading my letters. I fear you may think me rather a dry writer; but I write such things as I think will be of lasting benefit to you; I therefore hope you will bear with me, and try to profit from what I say. Young people are surrounded with so many temptations and dangers, that I feel it my duty to give them warning, and I shall feel extremely happy and more than compensated if I can succeed in my attempts to induce them to shun those dangers.

There is a very ruinous practice which many young persons are apt to fall into, which I wish to warn you against, that is drinking. I know of nothing that is better calculated to ruin the young than this. You may say that you are not addicted to this practice. I hope you are not, and I hope you never will be, but still there is danger. I have known even strong men to be overcome and ruined by this vice.

Bad companions—if you associate with them—may lead you into this habit. Or in some other way, you may be induced to put the intoxicating cup to your lips. You taste, and again you may be tempted to taste, and still you may think there is no danger; but before you are aware, a taste is acquired, and a habit formed, which, perhaps, may never be overcome. No one ever becomes a drunkard at once—the process is gradual, but very sure. And let me tell you, that there is no habit that can be formed, more difficult to get rid of than this—it is the next thing to an impossibility. There are very few instances of confirmed drunkards ever being reformed. It becomes a disease which is very seldom cured. Can you conceive of

anything more deplorable, than to see a man staggering in the streets under the influence of intoxicating liquor? But, how much worse is it to see a boy, or young man in this condition! Man is the only being on earth, that is endowed with reason. It is this noble faculty that distinguishes him from the brute; but if he destroys his reason by drink, what better is he than the brute? He is even worse; for often in a fit of intoxication he will kill his best friend. A drunken man is neither fit to serve God, his country, his fellow creatures, or himself. He is a nuisance to society, he is neither fit to live nor to die.

And now, my dear boys, would you not shudder at the very idea of becoming drunkards? Well if you will follow my directions, it will tell you how you may avoid the shame and disgrace. My prescription is very easy and simple. It never has failed, and it never will; it is this, *never taste spirits of any kind*. This is the only safe means. A person that tastes it at all, is in danger of becoming a drunkard. It is a poison, and that of the worst kind; for other poison will destroy the body, but this destroys both soul and body. My advice then is, "Touch not, taste not, handle not, the unclean thing."

Yours, truly,
GRAND PA.

TO OUR READERS.

[FOR THE LAST TIME, IN THIS JOURNAL.]

In July, 1856, we came into the office of this journal, then called the *Plough, the Loom, and the Anvil*, under an agreement to edit the agricultural department, for a stipulated per cent. of the income, which would have been a satisfactory compensation, had the number of subscribers and the amounts due from them been as represented to us, and as the books, on a cursory examination, seemed to show.

At the end of about ten months, in April 1857, finding the income but one third of what we had been led to expect, we were induced to purchase an interest of one half of the publication, hoping thereby to be able to change the mode of conducting it, so as to make it a paying concern.

Falling in this, and yet not willing to give up what we considered a good object, that of bringing the publication to a higher degree of usefulness and reinstating it in the public favor, we purchased, in Dec. 1857, the remaining interest in it, intending thereafter to omit the mechanical department, and publish it as an agricultural, horticultural,

and miscellaneous journal. This intention required us, in order that mechanics might not be deceived by the title, to change its name. We called it from that time the *American Farmers' Magazine*, and strove to adapt it to the wants of the farming community.

Its business relations, up to this time, had been almost wholly in the hands of our associate, who had managed them very much at his own discretion since 1852, or before. Upon his leaving the office and our taking the books in hand, it soon appeared that we had been sold, we had sold ourselves, if any will have it so, in consideration of the fact that we had been more or less in the office for nearly a year and a half, and ought to have known what we were about. We care little which, for we are not writing in a spirit of accusation but simply to inform our subscribers of the reasons which impel us to discontinue this work. The books, as they came into our care, were not an index of the concern. It soon appeared that in consequence of our last purchase, we had far more to pay, and far less to receive, than had been represented to us, or the books, after a pretty careful inspection had led us to expect. Our loss has been not less than \$5000. In consequence, there has been a lack of the money power, to make such improvements as we intended, and to put the work energetically before the country. Instead of collections, which we had depended upon, from accounts amounting to seven or eight thousand dollars, we have been compelled to rely almost entirely upon new subscribers paying in advance. These have come in well at times, and we have been encouraged. Friends in various parts of the country have sent us large clubs. But the work has not been and is not sustained. It dies of a collapse in the money drawer.

We have provided for those subscribers, who have paid beyond the present time. Mr. Orange Judd, of the *American Agriculturist*, will send that work, in place of ours till their times are out; and if any of our subscribers, to whom we owed this work longer, are already subscribers to his, he will prolong their times equitably. The *Agriculturist* is a first class journal of soil culture and of farming and gardening in all their

departments. It contains a larger amount of matter than ours has; is conducted with spirit and enterprise, and is always in time, on or before the first of each month, a point in which, on account of our embarrassments, we have too often failed. Conscious of the disadvantages under which we have labored, of many defects in our late work, we have no objection to your liking the *Agricultural* better, and without the least envy, we sincerely hope you will. Possibly we may occasionally be recognised by our former readers among the editorial contributors to that journal.

Our exchanges, whose uniform courtesy we gratefully acknowledge, will please direct no longer to the *Plough, Loom, and Anvil*, or to the *American Farmers' Magazine*, as it will not be hereafter in our power to return the favor.

If, through oversight, we have fallen short of our duty to any member of the press, it is not yet too late to make amends. Let us know and we will do you justice.

Any subscribers, who may have failed to receive all our issues, may have their files completed by informing us of the missing numbers; or if numbers have been lost after reaching the subscriber, we will supply them. In the latter case, a one cent stamp for each number should accompany the application, as we shall no longer have the right to forward without prepaying.

Those friends, who have sent us clubs, have our special thanks. If a few others had done as they have, we should have accomplished our purpose, that of giving a valuable journal at a most reasonable price.

Our post office address will hereafter be 55 Sands street, Brooklyn, L. I., where we shall be happy to hear from our friends, and any who may have occasion to address us.

BOOK NOTICES, &c.

VIEWS AND EXPERIENCES OF RELIGIOUS SUBJECTS; By HENRY WARD BEECHER: New York, Derby & Jackson, 119 Nassau Street, 1859.

"Henry Ward Beecher" is one of the few names that require no prefix or suffix. A "Rev" before, or a D. D. after it, would add nothing. As "Daniel Webster" is a sufficient appellation for one mortal, and "Henry Clay" for another, so the name "Henry Ward

Beecher" sufficiently indicates the pastor of the Plymouth Church, the man, who studies well now if he did not when a boy, who writes and talks good sense on all subjects, and does not believe it is necessary, in order to fit people for the next world, first entirely to unfit them for this. As all that Mr. Beecher says is worth hearing once, and reading at least twice, after being reported, this book is good of course. We have not read it yet; for we have not the industry to read as fast as the publishers—can't quite keep up with him; but we advise everybody else to read it without delay. Mr. Beecher's mission, if we comprehend it, is, to strip religion of its gloom, sadness, mystic dogmas, and to make it a thing of joy and gladness, of world-comprehension, and of every-day life. May God speed the accomplishment.

FLOWERS, GARDENING AND FARMING; By H. WARD BEECHER: Derby & Jackson, 119 Nassau Street, 1859.

And yet another! Whether there are flowers in a coming Paradise or not, they are one of God's beautiful gifts in this life; and that must be a very stupid man or woman—hardly a Christian, we should think, though perhaps not exactly a savage—who does not admire and love them, and receive pleasure from their expanding beauty and fragrance.

Gardening has the highest claims to attention, both from its aesthetic and its practical results. Alas that more mind, more genius, more intense activity is this moment exerted in the manufacture and use of deadly weapons, than in the gemming of earth with beautiful and productive gardens.

The earth is large enough to give every human living a portion of its surface. What a shame that outside of the city every family should not have an acre, and inside of it each family at least a rod! If society should ever be so constructed that all will take care of themselves, or be taken care of, every farmer will live in a goodly paradise; every villager will have a little paradise; and every citizen a piece of one. But we must not be dreamy.

Mr. Beecher, no doubt, looks upon the garden as one of the influences, yet to be availed of in a higher degree than hitherto, for employing, purifying, elevating the human soul; and we think he does well to give the subject a portion of his thought. To living

mankind into love with nature, is no unimportant step towards bringing them into love with nature's God.

Farming is a rather rough and tumble business for one who has to hold up *clean* hands many times a week before large audiences, to touch; and yet Mr. Beecher touches it as if fearless of *soil*. In running over the pages of his book, our first impression was, "This is the current agricultural literature of the country; we have read it somewhere; has the author stolen it? No; it has the mark of the Beecher, but we have read it all a dozen times before; what does this mean?"

In our dilemma, we turned to the preface. It appeared that Mr. Beecher had written these short, spicy articles, some fifteen or twenty years ago, while preaching in Indianapolis, and had published them in sundry Western Journals, thinking, perchance that to make the people of that growing region better farmers & gardeners would make them them no worse christians; and would at least gratify his intense love of nature. His sources of terracultural knowledge seem to have been largely from the Indiana State Library, more largely from an almost daily converse with practical farmers, and in no small degree from his own efforts to bring a small income up to a living point by the cultivation of a few garden and farm crops.

The secret was out; Mr. Beecher had not stolen the world's thoughts, the world has stolen his; has used them till they have become common-place; and now Derby & Jackson have gathered them up, after they have been the rounds of the press at least seventy times without a name and have published them with the name of the veritable author. Much of the instruction they contain is admirable—worth calling to mind once more than seventy times. Some of it—very little—is not exactly what Mr. Beecher would have put forth, if he had been writing for the express purpose of making a book for 1859; and perhaps would not have "let gone," had abundant time for revision been at his disposal.

But the book is a good one. It is "brim full" of wit and humor and sound judgment "in the main." Get it. Read it. If you suck out all the good there is in it, you will find there is not much left for you to have

paid for without receiving an equivalent. "It will pay," in laughing, besides all the practical, common sense, good sense instruction; and laughing does every body good, provided there is something worth laughing about.

Too many farmers do not read. To them this book will be "brian new." For reading farmers it will be worth while to know to whom they are indebted for the spiciest articles they have been reading over and over again, in their newspapers for the last dozen years.

The local newspaper is *the great educator of our country*; all honor to it; scarcely a family in the land—non readers excepted—but is elevated and made happier and more useful by its influence; but it does sometimes dress itself in borrowed thoughts for which it is none the worse, but might as well inform the reader whence its thoughts come.

Dogs; Their Origin and Varieties, Directions as to their General Management, Treatment under Disease. By H. D. RICHARDSON. With numerous illustrations on wood. A. O. Moore, 140 Fulton street, New York, publisher.

We happen not to think as well of keeping dogs as of keeping sheep. The dog nevertheless has some amiable qualities and is in many instances useful; and inasmuch as many will have a dog or a pack of them, it is well to know how to train them, to cure the diseases they are subject to, make them as little harmful as may be as useful as possible. For such purposes this book is the very thing. It is one of the many valuable books published as above, and is sent post paid on receipt of the price, 25 cents in paper, 50 cents in muslin.

THE HIGHER CHRISTIAN LIFE. This we believe to be one of the comparatively few books, destined to live and exert a high christian influence, when a majority of its contemporaries, shall have run their ephemeral course and been forgotten. It is at once instructive and interesting, teaching by examples drawn from the lives of the best of men, and alluring the reader to a religion of the heart, and a life reverent towards God, and loving towards man.

It is for sale by Sheldon & Co., 115 Nassau street, New York.

SEWING MACHINES.

From the Independent.

Our First Experience with a Sewing-Machine.

A "STAR" PAPER BY THE REV. HENRY WARD BEECHER.

AMONG the things which we did not, but now do believe in, is the Sewing-Machine. One thing after another had been invented; one machine after another had superseded manual labor, until human hands seemed about to go out of use, for any other mechanical purposes than that of lovers' pressures, orators' gestures, and for beaux' and belles' gloves. But we always consoled ourselves that one or two things there were yet, which no machinery could perform. We could imagine children put through a whipping-machine, and we had long been accustomed to see them taught by automatic machines. There was a time-honored business handed down to us, without a break, from the Garden of Eden, of courting—and kissing as one of its ordinances—no machinery could ever perform that. Machine poetry, and machine sermons, we were familiar with. Babbage can make machines for ciphering, for computing logarithms, for casting up interest, but can he invent a machine for *saving* interest, and capital too, for that matter? And, oh! can there ever be a machine for answering letters? We would pay any price for a machine, into which letters being put, and a crank turned, there should drop out at the other side answers, as good as the letters, folded, directed, and stamped!

But machines have steadily gained ground, and the iron muscle has relieved the flesh hand; machines for boring, sawing, cutting, planing; for making bread, (I wish there was one for eating some of it,) for pumping water, for making cattle draw their own drink. But, notwithstanding, we firmly believed that some things would never be done by any fingers except human, and eminent among these impossible things was sewing! Nothing, we were sure, could ever perform that, except the latest and best invention of Paradise—Woman!

When the rumors began to prevail, then, respecting an invented sewing-machine, we lifted our eyebrows gently, and went on our way with a quiet consciousness that we could not be taken in by any such story. We regarded it as of a piece with new-found morality in old politicians, with the thousand annual rumors of some heaven-dawned virtue in Washington City—a mere device to catch the credulous.

But, day by day, the clatter grew. Indeed, we surprised ourselves with a coat, sewed in important respects by machine. We saw linen pyramids of sheeting made for hotels and steamboats by sewing-machines.

The case was growing serious, indeed; and, at last, it came to a head, when the head of the family informed us, that a woman was to come in a few days, with her Wheeler and Wilson, and do up the family sewing. Of course, we submitted without a word. And the three capable persons of this household began to prepare matter for the machine, to an extent which showed how perfectly they had been fooled by the story of its executive ability. Piles of large stuff lay in each corner; little stuff covered the table; and miscellaneous stuff lay everywhere. We ran against cotton heaps, were in danger of getting tangled in webs of linen and sheeting at every turn, and such ripping, and tearing, and cutting, and basting, as went on, would lead one to imagine that an army was to be clothed.

The day dawned. The woman came, and the not Wheeler and Wilson came with her, only the lady had to act as beau, and offer her aid to wait on *Messrs. W. and W.* After a little, there arose a buzz from our chamber, not unlike the buzz of a

wheat-mill, such as we have heard it ~~summar~~, sitting under willow trees on the edge of a stream, over against a red mill, white dusted. Soon we heard excited exclamations. Everybody seemed stirred up. The girls left their work; the children forsook their playthings, and we followed the example.

There sat before the simple machine-stand, a fair young woman, some sixteen years old, whose foot, like that of old-fashioned flax-spinners, was working the treadle with the nimblest motion. Then came the conviction, for the first time, that sewing was conquered and vanquished! Long sheets, entering the fatal pass, streamed through, and came out hemmed, in a ridiculously short time. An hour's work was done up before your eyes in one minute. A shirt was set in, of such dimensions, that (we call Baron Munchausen to witness!) a man could not get round it by fair walking, in less than—well, in some time! It streamed through the all-puncturing—Wheeler and Wilson about as soon as a good-sized flag, being hoisted, would unroll and flow out to the wind. A bundle of linen took its turn, and came forth a collar, a handkerchief, a cap. There goes in a piece of cloth!—there comes out a shirt! We were bewildered. Not much was done for some hours in that house but gaze and wonder. We mistake. A good deal more was done, and done more effectually, than had ever been done in ten times the time before! What heaps of towels—what piles of sheets—what bedfuls of small trumpery—what bureaus full of fine trash—what carpet-littering stacks of unmentionable matters that make up the cloth-inventory of household wealth!

The dismayed woman of the house saw her three days' prepared work melting away before noon, as a three days' April snow disappears in a few hours!

The voracious machine began to show its teeth and to demand more food—and now it was a fair race, whether two women could prepare as much as one machine could perform! It did our very souls good. At last, we hoped this was working fast enough. Oh, what early hours has our lamp been made to illumine! Ah, what breakfasts have we eaten, and seen cleared away, long before the sun touched even the cheek of day! What impetuous industry had glowed about the house, forenoon, afternoon, night, midnight—never enough, never overmatched! We grew tired even to look at it! At last, said we, You've got your match. Now, then, we will sit down and see this race, with a satisfaction that shall include years of revenge for disturbed indolence!

For a long time the match was doubtful. Sometimes it was the machine that had the advantage, and sometimes it was not. The contest was passing into the middle of the afternoon. It was doubtful. Sometimes the fast-driven needle evidently gained; then again, in rounding up a sleeve-gathering, the needle flagged, and then the hand-worked scissors gained! But iron and steel are more enduring, even, than a housewife's courage. And though for any single hour the hand could prepare faster than the machine could execute, yet, taking the day through, Wheeler and Wilson had the advantage, and came out at dark decidedly ahead. That settled it. There was a revolution in this household. Our Miriam sounded her timbrel and triumphed over the cruel Pharaoh of the needle, whose dynasty and despotism were ended!

Now, sewing is the family amusement. Our Wheeler and Wilson is played on a great deal more than our Steinway piano—and is the cause, too, of more real music than is ever got out of that instrument; for two canary birds, perched on either side of the book-case, understand the first click of the sewing-machine to be a challenge, and while the machine sings *staccato*, they warble *ad libitum*, and between the *solfeggio* of the one and the *cantabile* of the other, we go crazy.

THE article published in our last issue, upon Wheeler and Wilson's Sewing Machines, has excited much interest, and called forth many inquiries as to whether the use of the machine is easily learned, whether it can be learned if sent into the country, where personal instruction cannot be had, whether it is likely to get out of repair, what material it will sew, and how much work can be done with it. We applied to the manufacturers for information on these points. They answered us satisfactorily, and opened to us their private correspondence, from which we have made extracts bearing upon the above questions, and which confirm their own representations. Judging from the immense demand for these machines, now being made at the rate of 25,000 per annum, we should say they are all that they are represented to be.

Mrs. H. M.— writes: "After using one in my family for two years, it is but justice to your '*Sewer*' to say to you, that it has fully met the expectations in regard to it. Could it not be replaced, I would not part with it for any consideration, and so expressed my opinion to many friends, who have become purchasers, with entire satisfaction to themselves."

Prof. Wm. S.— of — College, writes: "I have learned the use of your machine alone, and am perfectly satisfied with its working. I have no doubt, that in the hands of any person of ordinary skill, it is capable of doing all that you claim for it. In the simplicity of its parts, in its compactness and beauty of form, and the facility with which it may always be kept in working order, it appears to me to possess all the characteristics of a *perfect machine*."

Mr. M. C. R.— writes: "I have just received a letter from the Rev. S. M. D.— of —, informing me that the Sewing Machine he ordered from you, through me, has reached him in safety, and that its operation is entirely satisfactory, and was comprehended by himself and lady in less than two hours after it was received."

Mr. J. T.— writes: "The machine arrived in good order. I do not know that I could say anything half so expressive of the wonderful simplicity and value of the machine as the following statement: On Wednesday afternoon my son put up the machine; and the next day learned to work it with facility, and this, too, without any 'directions,' which your packer forgot to put into the box. The ladies have tried their hand to-day; have learned the principle of its construction, and will soon be expert in its management. The power press, the locomotive, and the telegraph have been aptly termed the three cardinal points of the age; we may now complete the circuit by the addition of the fourth, the Sewing Machine. I will write to you when I can fix upon the best and simplest expression of my entire satisfaction with your wonderful machine."

The Rev. A. H.— says: "We have now been using the machine several months, and can bear testimony to its worth as a labor-saving machine and a genuine friend of all good housekeepers. Although we were conscious of much ignorance as to machinery, we very readily set it to work. Indeed, it is our settled conviction, that in setting forth a bill of Woman's Rights, at the head of the list should be put a Wheeler & Wilson Sewing Machine."

Mrs. C. B. W.— says: "The Machine always gave satisfaction, and I cannot say too much in its praise. Each piece of work gives renewed pleasure. I really think it is as near perfection as any piece of machinery can be."

Mrs. J. M. G.— says: "My Machine is working *most beautifully*. I have finished six shirts, and am now at work on six more. I would not take \$500 for it if another like it could not be had. I never break a needle, and get on swimmingly. I really feel sorry for any one who has not Wheeler & Wilson's Machine."

Mrs. E. J. R.— writes: "My household *faery* came promptly, within two weeks of the time I sent the check. Our *first impressions* were, of course, favorable, for it is very beautiful, and, merely as an ornament, would add to the attractions of any parlor. But what can she do with those white arms of hers? Dainty as her appearance is, she will accomplish more than half a dozen seamstresses, and the work is *perfect*. I am more than satisfied with my investment. We have many calls, of course, for her, ladyship is a novelty here. I just give her a piece of work (by the way, my work is done so rapidly I am puzzled to find enough), and it is done in a trice. A lady, who intends purchasing, called for a sample of work. A large pillow-case was stitched and hemmed in three minutes; and I am only a beginner, you know. Talk about the Atlantic Cable! We don't consider it a circumstance, when compared with the Wheeler & Wilson Sewing Machine; for, while that is frittering away its electric life on the submarine cliffs, the little Sewing Machine, with its musical click, click, is lengthening many a human life. Steel nerves and muscles are more enduring than those of the human frame. When we get up a jubilee, it will be in honor of the Sewing Machine."

Miss de G.— says: "I stitched eighteen yards of tucking in eleven minutes, far more beautifully than I could have done it by hand."

Miss M.— (seamstress) says: "I can stitch, regularly, two shirt wristbands per minute, and do other work proportionally rapid."

Mr. W.— says: "After my machine was brought home, I was desirous of trying my hand at stitching. I had a pair of heavy cloth pantaloons prepared, that I might stitch them myself. I stitched the four seams of the legs—about six yards—in less than ten minutes. I used silk, and although that was about eighteen months since, and I have worn the pantaloons for months in the proper seasons, not a stitch of the machine work has started. Mrs. W. considers the machine of inestimable value. Her work is better done than it ever was by hand, and she is entirely relieved from the everlasting stitch, stitch."

Mrs. S.— (a Southern lady), writes: "I bought a machine of you one year ago for \$100. I took it home; and, although I could work it perfectly, I could not learn one of my people, though I had six sewing women, to use it. I think they imagined it was some Yankee invention to interfere with their old-time customs, and did not wish to learn. I had unwittingly said that the machine would do as much sewing as six women. But I was not to be balked, and so I bought a girl for \$1,100, who said, if I would buy her, she could and would learn, and learn she did; and I have been since offered repeatedly \$2,000 for the girl and machine, but I won't take it, for it does the work of six, and, of course, gives Mr. S.— five more hands in the field."

Rev. S.— O.—, D. D., writes: "I take pleasure in saying that the Sewing Machine purchased of you by me, has been wholly serviceable."

A HOUSEHOLD TREASURE.

We have a special word to say to our lady friends, gathered about our cheerful "Center-Table," this cold February day. We have been listening to Mrs. Green and Mrs. Brown, very particularly, on the old domestic grievance—the servant question. We acknowledge that much of their experience has been our own; but there is one "family servant" amenable to none of their charges—one that never idles unless it is the will of the employer, and is not given to being over-dressed, consumes no food, makes no washing, asks no wages, and, above all, though freely admitted to the family-circle, never retails your private affairs in the kitchen.

"I should like to see such a paragon, that's all!" Mrs. Green says, skeptically; but Mrs. Brown smiles a little, and suggests "a Sewing Machine" to the riddle we have propounded.

Mrs. Green doesn't believe in them. "It's all very well for these poor souls we read about, who used to get sixpence a day for making shirts, or for those great work-rooms like Douglas & Sherwood's, or the mantilla people; but they won't answer for family sewing." And she thereupon produces an immense amount of individual testimony to support the assertion.

"The work rips so too," Mrs. Brown adds; "if one stitch goes, there's the whole seam!"

"And that great cord on the under side!" Mrs. Black says; for, though she has come to spectacles, she still prides herself on her stitching. Plain sewing was taught as an accomplishment in Mrs. Black's school days. "It never will do for fine work—never!"

"Baby clothes," suggests little Mrs. White, busy on a dainty slip with infinitesimal ruffles.

"And they get out of order so easily," Mrs. Green adds, warming with the corroborating opinion of the rest. "Mrs. Ray's is perfectly useless, and there's twenty-five dollars thrown away!"

"Oh, if I was going to get one, it should be the very best; none of those cheap things. What could you expect?"

"Which is the best?—that's the thing." And Mrs. Green's very good mouth turns a little scornfully, and her tone seems to indicate that she has proposed a question it is impossible to solve in the midst of such contending claims.

"Oh, I should find out; but imagine Mr. White paying out a hundred and twenty-five dollars for me! He would think I was beside myself if I asked it. A hundred dollars isn't made every day, and I think it's a wife's duty to save for her husband and children."

You have been married a year, little lady, and you have many beautiful theories, but experience is the surest guide. You aim high to be your husband's best friend and helper, in all social and intellectual progress, a pattern and example to your children; but as the years roll on, and a crib is added to a baby's cradle, and the wants of elder children accumulate a pressure of spring or winter sewing, that depresses your spirits and wears upon your strength, how are your higher duties to be accomplished, in

the midst of incessant toil, that forbids alike progress or recreation? That is not economy which wastes a wife's best capital—health and cheerfulness. Ask your neighbor—fretful, sickly Mrs. Jenkins—what she thinks of help that, for once in her married life, would empty the over-drawing work-basket; or pale Miss Thomas, that you pity so, because, as the eldest daughter of that great family, she sits, from breakfast till dinner, and from dinner till tea, toiling more steadily than her mother's maid-of-all-work, while she craves time for study and womanly accomplishments, though she bends, with patient self-denial, to the irksome bondage. Do you know, besides all this, that the husband for whom you are ready to sacrifice so much will whiff away the hundred dollars before you have saved him twenty-five? You had no brothers, and you do not know that cigars are forty dollars a thousand.

But it is time, since such discussions arise in every little womanly gathering throughout the land, that the "Center-Table" pronounced, in sober earnestness, on the various objections that are urged, and look into Mrs. Green's question—"Which is the best?" more especially.

We commenced our investigations in a social and non-official capacity. Fully a year since, when the almost universal ruin brought many a delicate hand in contact for the first time with toil, it became a matter of life and death importance to one reared in the midst of comfort, that she should select the very best substitute for the wearing needle-work that alone stood between her and absolute want. The kindness of a friend supplied the means—the support of three children the strongest motives for immediate action—and, with these reasons for deciding wisely for one who called forth our strongest sympathies, we entered on our self-appointed quest.

First to "the great workrooms" which Mrs. Green has cited, where years of experience had fully tested the several inventions. At Genin's we were told "Wheeler & Wilson's, for family sewing, most unquestionably." We inclined, at that time, to another manufacture, and were not disposed to make this final. At Brodie's, the same reply. In the midst of the marvellous enterprise and industry at Douglas & Sherwood's, we were pointed to the same source, for their most efficient aid; for simplicity, for rapidity, for the best stitch, the most durable work; and all this we wished to find. "But for shirts, for family sewing?" we asked of others, to receive the same reply. So "a Wheeler & Wilson" was purchased, to prove, under our own observation, the truth of all that was urged in its praise. Still, the price—at first one hundred and twenty-five dollars, now one hundred—for the pretty work-table, entirely inclosed, seemed a great deal to take at once, even with a prospect of future repayment, as a "savings bank," from a moderate income. Of late, we noticed, by chance, the advertised reduction, by the same firm, of a really good and useful machine for half that sum. To assure ourselves that it was fully as serviceable, we paid our first visit to the establishment. Imagine, if you please, a large and elegantly furnished drawing-room, set about with pretty little articles of furniture, which at

first might be taken for a small musical instrument, and in the center a group of from ten to twenty handsomely-dressed ladies, "taking lessons," though the music has more of the cheerful hum of the spinning-wheel than the sad tone of the melodeon. These are purchasers, who are being instructed in the full use of their new possession—in its seaming, quilting, gathering, hemming, and felling capabilities—from competent instructors, provided by the firm. One of them most kindly and fully satisfies our curiosity; assures us that, for all *working purposes*, though unornamented and uninclosed, the work-table at fifty dollars equals its more costly neighbors; explains to us the construction of the instrument; illustrates practically the regularity of the stitch upon both sides of the seam, there being no ridge whatever underneath—the working of the gauges for regulating its width, until the hand and eye are trained, and, above all, the new and all important "hemmer," by which the most delicate ruffle may be *turned* and hemmed with a rapidity and precision that defy description.

Therefore we speak advisedly in commending, for general family use, this most profitable of all servants, to be found at the "intelligence office" of Wheeler & Wilson, willingly acting as reference to its honesty, docility, and general good character.

From the N. Y. Tribune.

Women can no longer be sent to the loom and the wheel, as in days when the garments of the household were woven and spun by the loom and spindle at home, for our spinning-jennies have taken the labor out of their hands years ago. New modes of labor opened with the opening resources of the country. Woman found more leisure for mental improvement, with the disuse of the spindle and loom. Still there remained her servitude to the needle, side-stitch, hem, fell, "seam, and gusset, and band," "band, and gusset, and seam," from matins to vespers; wife, maid, and servant; lady, and working woman—all of the feminine class were to be occupied forever and forever, to all eternity in futurity, to gather breadths of linen for a household.

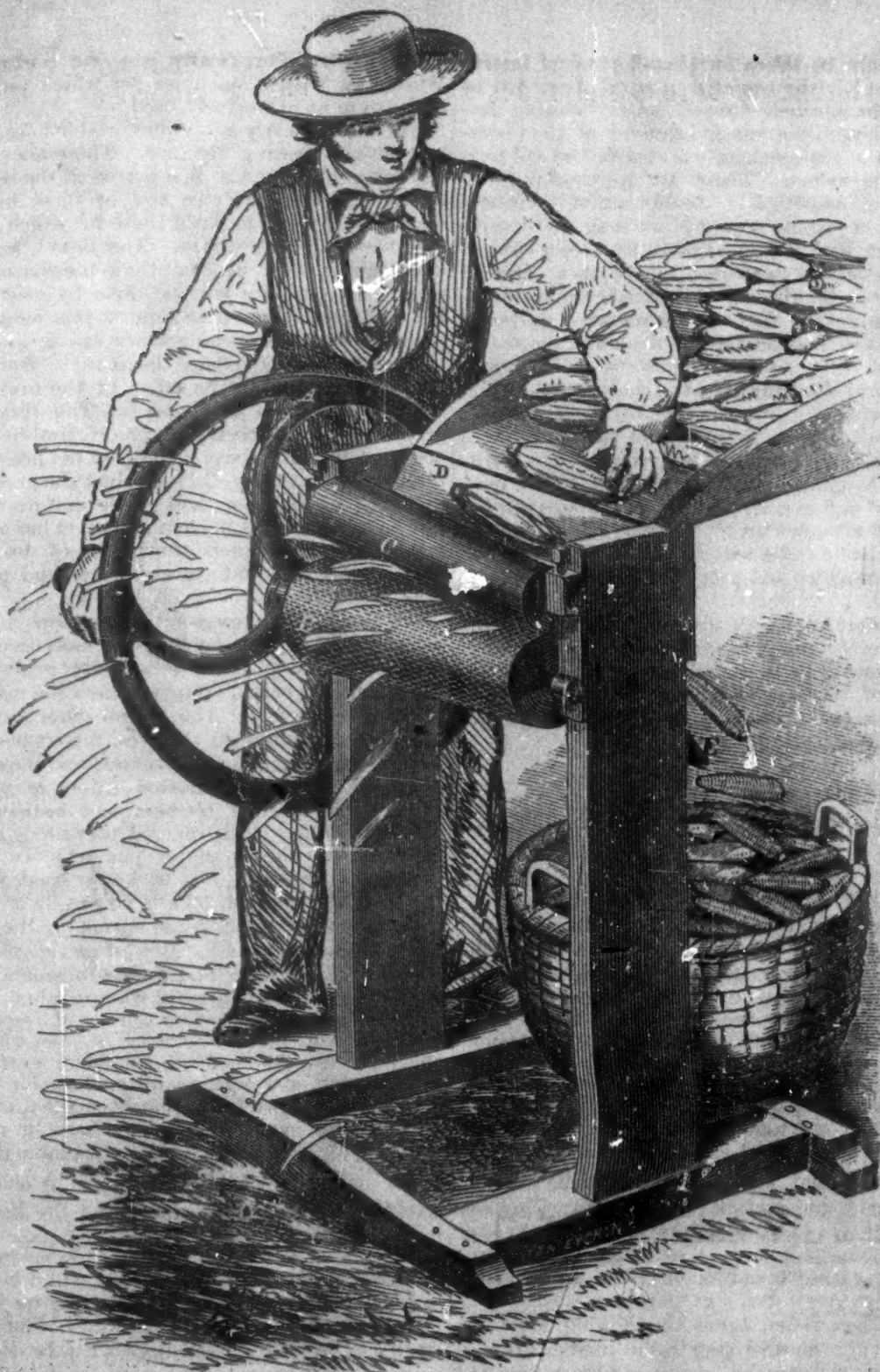
As a last relief, came the Sewing Machine. We saw in it another step in the emancipation of woman. We saw that she would be exonerated from much that was monotonous, wearisome, and belittling in her lot. We saw that the machine would save numberless eyes, myriads of nerves, and that households must, through this invention, become more intelligent, more genial, and altogether help a better development in society. The solitary needle will pass into disuse. The Sewing Machine does all that was fatiguing and wearisome in the manufacture of garments, and now woman has taken another step towards freedom. It will force the industry of woman into a thousand new channels, and emancipate her from the cramped posture and slow starvation of

needle-work. For family use, we prefer the Wheeler & Wilson Machines, for which purpose they are most extensively used.

Ultimately, nearly every comfortable household will have its Sewing Machine. There are seamstresses in our city who first borrowed the money to buy one, and now own two or three, having other seamstresses to work those for which their own hands do not suffice. The time is rapidly approaching when, at least, three-fourths of the sewing in our city will be done by machines. Let us hope that the blessings of this industrial progress which is opening a new era upon mankind, will be enjoyed by the many. Woman's brain will soon do its office in the world, as she has opportunities to use it. The thralldom of the needle has been her greatest trial in civilized society. Her busy fingers left her brain free for all its worst uses. She has had the graces of quietude, of seclusion, and gentle culture about it, which has always made a woman at her needle suggest to our brothers the image of domestic content, love in a cottage, and other and pretty false dreamings.

We have had opportunities to know, and we assert that a woman confined for more than two or three hours at her needle daily, is always a discontented woman, however much she may try to disguise the fact. The minute attentions required, the strain upon the eyes, the confined attitude—all wear upon the nerves, and impel the unoccupied brain to morbid trains of action. Women of cheerful temperament instinctively seek each other, when obliged to sit long at the needle. In country places you will see them with shawl on head, and basket in hand, wending their way to each other's houses, in order to have a friendly gossip while advancing the comforts of the household. Men often ridicule this propensity in women, and those of a sullen temper put a stop to it in some way or other. But it is an instinctive wisdom worthy of respect, a harmless protection to nerves. Women who are obliged to use the needle much alone, invariably grow morbid, lose both health and spirits. For ourselves, when we have been compelled to this necessity, we have studied some book, at intervals, as a hindrance to excessive mental activity. The needle will soon be consigned to oblivion, like the wheel, and the loom, and the knitting needle. The working woman will now work fewer hours, and receive greater remuneration. People will have more work done, will dress better, change oftener, and altogether grow better looking, as well as nicer looking. The more work can be done, the cheaper it can be done by means of machinery—the greater will be the demand. Men and women will disdain the soupçon of a nice worn garment, and gradually we shall become a nation without spot or blemish. Fresh lavendered linen would so create the demand for civic cleanliness and moral purity, that golden-haired children, with muslin robes, and dainty women, redolent of roses and snowy lawn, white jacketed men, with sprigs of flowers in the buttonhole, would tread Broadway, garnished and watered before the sun, with the same impunity they would walk a saloon, and Diogenes will come out with his lantern, not in pursuit of an honest man, but the great anomaly—a rogue.

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